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February 8, 2017

**RECEIVED ON:**

**Via Certified Mail - Return Receipt Requested**

Managing Agent  
Manke Lumber Co., Inc.  
1717 Marine View Dr.  
Tacoma, WA 98422

FEB 10 2017

DRC  
EPA Region 10  
Office of the Regional Administrator

**Re: NOTICE OF INTENT TO SUE UNDER THE CLEAN WATER ACT AND  
REQUEST FOR COPY OF STORMWATER POLLUTION PREVENTION  
PLAN**

Dear Managing Agent:

We represent Puget Soundkeeper Alliance (“Soundkeeper”), 130 Nickerson Street, Suite 107, Seattle, WA 98109, (206) 297-7002. Any response or correspondence related to this matter should be directed to us at the letterhead address. This letter is to provide you with sixty days notice of Soundkeeper’s intent to file a citizen suit against Manke Lumber Co., Inc. (“Manke”) under section 505 of the Clean Water Act (“CWA”), 33 USC § 1365, for the violations described below. This letter is also a request for a copy of the complete and current stormwater pollution prevention plan (“SWPPP”) required by Manke’s National Pollution Discharge Elimination System (“NPDES”) permit.

Manke was granted coverage under Washington’s Industrial Stormwater General Permit issued by the Washington Department of Ecology (“Ecology”) on August 21, 2002, effective September 20, 2002, modified on December 1, 2004, reissued on August 15, 2007, effective September 15, 2007, reissued again on October 15, 2008, effective November 15, 2008, and remaining effective through December 31, 2009, under National Pollutant Discharge Elimination System Permit No. SO3000325 (the “2002 Permit”). Manke was granted coverage under the subsequent iteration of the Washington Industrial Stormwater General Permit issued by Ecology on October 21, 2009, effective January 1, 2010, modified May 16, 2012, effective July 1, 2012, and which expired on January 1, 2015, under National Pollutant Discharge Elimination System Permit No. WAR000325 (the “2010 Permit”). Ecology granted Manke coverage under the current iteration of the ISGP, issued by Ecology on December 3, 2014, effective January 2, 2015, and set to expire on December 31, 2019 (the “2015 Permit”) and maintains the same permit number, WAR000325.

Manke has violated and continues to violate the CWA (see Sections 301 and 402 of the CWA, 33 USC §§ 1311 and 1342) and the terms and conditions of the 2010 Permit and the 2015 Permit (collectively, the “Permits”) with respect to operations of, and discharges of stormwater and pollutants from, its facility located at or about 1717 Marine View Drive, Tacoma, WA (the “facility”) as described herein, to the Hylebos Waterway, which is a

tributary of Commencement Bay, a part of Puget Sound. The facility subject to this notice includes any contiguous or adjacent properties owned or operated by Manke.

## I. COMPLIANCE WITH STANDARDS.

### A. Violations of Water Quality Standards.

Condition S10.A of the Permits prohibits discharges that cause or contribute to violations of water quality standards. Condition S12 prohibits Manke from allowing solid waste material or leachate to cause violations of water quality standards. Water quality standards are the foundation of the CWA and Washington's efforts to protect clean water. In particular, water quality standards represent the U.S. Environmental Protection Agency ("EPA") and Ecology's determination, based on scientific studies, of the thresholds at which pollution starts to cause significant adverse effects on fish or other beneficial uses. For each water body in Washington, Ecology designates the "beneficial uses" that must be protected through the adoption of water quality standards.

A discharger must comply with both narrative and numeric criteria water quality standards. WAC 173-201A-010; WAC 173-201A-510 ("No waste discharge permit can be issued that causes or contributes to a violation of water quality criteria, except as provided for in this chapter."). Narrative water quality standards provide legal mandates that supplement the numeric criteria. Furthermore, the narrative water quality standard applies with equal force even if Ecology has established a numeric water quality standard. Specifically, Condition S10.A of the Permits requires that Manke's discharges not cause or contribute to an excursion of Washington State water quality standards.

Manke discharges to the Hylebos Waterway. The Hylebos Waterway does not meet water quality standards for several toxic substances, including dieldrin, polychlorinated biphenyls (PCBs), chlorinated pesticides, DDT, and high molecular weight polycyclic aromatic hydrocarbons (HPAH) and is included on the state's "303(d) list" of impaired water bodies. Manke discharges stormwater that contains elevated levels of turbidity, zinc, copper, chemical oxygen demand (COD) and total suspended solids (TSS) as indicated in the table of benchmark exceedances below. These discharges cause and/or contribute to violations of water quality standards for PCBs, DDT, zinc, copper, turbidity and dissolved oxygen in the Hylebos Waterway, as well as violations of the toxics water quality criteria for "good" aquatic life uses, secondary contact recreation, wildlife habitat, and harvesting, and have occurred each and every day during the last five years on which there was 0.1 inch or more of precipitation, and continue to occur. *See* WAC 173-201A-210; 173-201A-240; 173-201A-260; 173-201A-610; and, 173-201A-612. Precipitation data from that time period is appended to this notice of intent to sue and identifies these days.

In addition, Manke allows leachate and solid waste material, including wood chips and sawdust, to migrate to storm drains both on and off site. Manke also regularly pumps leachate through a hose to the stormwater ditch running along Marine View Drive, including on January 20, 2017. This conduct causes violations of State Surface Water Quality Standards, including the impairment of aesthetic values by the presence of materials and substances

which offend the senses of sight, smell, touch, or taste in the Hylebos Waterway and the other applicable standards described above. *See WAC 173-201A-260(2)(b); Permits Condition S12.* These violations occur each and every day over the past five years that Manke pumped liquid from catch basins or vaults to the roadside ditch and each and every day during the last five years on which there was 0.1 inch or more of precipitation, and continue to occur. Precipitation data from that time period is appended to this notice of intent to sue and identifies these days.

**Table 1: Benchmark Exceedances – Outfall 001**

Quarter in which sample collected	Zn Concentration (Benchmark 117 µg/L)	Turbidity (Benchmark 25 NTU)	Cu Concentration (Benchmark 14 µg/L)	COD Concentration (Benchmark 120 mg/L)	TSS Concentration (Benchmark 100 mg/L; 30 mg/L after January 2, 2015)
1st Quarter 2012	170 µg/L	67 NTU	41 µg/L		
4th Quarter 2012	160		16		
1st Quarter 2013			17		
2nd Quarter 2014			31		
3rd Quarter 2014	280		47	130 mg/L	
4th Quarter 2014			31		
1st Quarter 2015			17		

**Table 2: Benchmark Exceedances – Outfall 004**

Quarter in which sample collected	Zn Concentration (Benchmark 117 µg/L)	Turbidity (Benchmark 25 NTU)	Cu Concentration (Benchmark 14 µg/L)	COD Concentration (Benchmark 120 mg/L)	TSS Concentration (Benchmark 100 mg/L; 30 mg/L after January 2, 2015)
1st Quarter 2012		64 NTU			
1st Quarter 2013		56 NTU			

**Table 3: Benchmark Exceedances – Outfall 005**

Quarter in which sample collected	Zn Concentration (Benchmark 117 µg/L)	Turbidity (Benchmark 25 NTU)	Cu Concentration (Benchmark 14 µg/L)	COD Concentration (Benchmark 120 mg/L)	TSS Concentration (Benchmark 100 mg/L; 30 mg/L after January 2, 2015)
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1st Quarter  
2013

39 NTU

**Table 4: Benchmark Exceedances – Outfall 006**

Quarter in which sample collected	Zn Concentration (Benchmark 117 µg/L)	Turbidity (Benchmark 25 NTU)	Cu Concentration (Benchmark 14 µg/L)	COD Concentration (Benchmark 120 mg/L)	TSS Concentration (Benchmark 100 mg/L; 30 mg/L after January 2, 2015)
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1st Quarter 2012		38 NTU		460 mg/L
2nd Quarter 2012				360
4th Quarter 2012	250 µg/L		33 µg/L	1,300
1st Quarter 2013	200	130		1,500
2nd Quarter 2013				270
1st Quarter 2014	150	58		1,000
2nd Quarter 2014		32		410
3rd Quarter 2014	220	32		
4th Quarter 2014	290			340

## B. Compliance with Standards.

Condition S10.C of the Permits requires Manke to apply all known and reasonable methods of prevention, control and treatment (“AKART”) to all discharges, including preparation and implementation of an adequate SWPPP and best management practices (“BMPs”). Manke has violated and continues to violate these conditions by failing to apply AKART to its discharges or to implement an adequate SWPPP and BMPs as evidenced by the elevated levels of pollutants in its discharge indicated in the tables above and as described below in this notice of intent to sue.

Condition S1.A of the Permits requires that all discharges and activities authorized be consistent with the terms and conditions of the permits. Manke has violated these conditions by discharging and acting inconsistent with the conditions of the Permits as described in this notice of intent to sue.

## **II. STORMWATER POLLUTION PREVENTION PLAN VIOLATIONS.**

On information and belief, Manke is in violation of the Permits' SWPPP provisions as follows:

1. Condition S3.A.1 of the Permits requires Manke to develop and implement a SWPPP as specified. Condition S3.A.2 of the Permits requires the SWPPP to specify BMPs necessary to provide AKART and ensure that discharges do not cause or contribute to violations of water quality standards. On information and belief, Manke has violated these requirements of the Permits each and every day during the last five years and continues to violate them as it has failed to prepare and/or implement a SWPPP that includes AKART BMPs and BMPs necessary to comply with state water quality standards.
2. Condition S3.A of the Permits requires Manke to have and implement a SWPPP that is consistent with permit requirements, fully implemented as directed by permit conditions, and updated as necessary to maintain compliance with permit conditions. On information and belief, Manke has violated these requirements of the Permits each and every day during the last five years and continues to violate them because its SWPPP is not consistent with permit requirements, has not been fully implemented and has not been updated as necessary.
3. The SWPPP fails to satisfy the requirements of Condition S3 of the Permits because it does not adequately describe BMPs. Condition S3.B.4 of the Permits requires that the SWPPP include a description of the BMPs that are necessary for the facility to eliminate or reduce the potential to contaminate stormwater. Condition S3.A.3 of the Permits requires that the SWPPP include BMPs consistent with approved stormwater technical manuals or document how stormwater BMPs included in the SWPPP are demonstratively equivalent to the practices contained in the approved stormwater technical manuals, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs. Manke's SWPPP does not comply with these requirements because it does not adequately describe BMPs and does not include BMPs consistent with approved stormwater technical manuals nor does it include BMPs that are demonstratively equivalent to such BMPs with documentation of BMP adequacy.
4. Manke's SWPPP fails to satisfy the requirements of Condition S3.B.2 of the Permits because it fails to include a facility assessment as mandated. The SWPPP fails to include an adequate facility assessment because it does not describe the industrial activities conducted at the site, the general layout of the facility including buildings and storage of raw materials, the flow of goods and materials through the facility, regular business hours and seasonal variations in business hours or in industrial activities as required.

5. Manke's SWPPP fails to satisfy the requirements of Condition S3.B.1 of the Permits because it does not include a site map that identifies significant features, the stormwater drainage and discharge structures, the stormwater drainage areas for each stormwater discharge point off-site, a unique identifying number for each discharge point, each sampling location with a unique identifying number, paved areas and buildings, areas of pollutant contact associated with specific industrial activities, conditionally approved non-stormwater discharges, surface water locations, areas of existing and potential soil erosion, vehicle maintenance areas, and lands and waters adjacent to the site that may be helpful in identifying discharge points or drainage routes.

6. Manke's SWPPP fails to comply with Condition S3.B.2.b of the Permits because it does not include an inventory of industrial activities that identifies all areas associated with industrial activities that have been or may potentially be sources of pollutants as required. The SWPPP does not identify all areas associated with loading and unloading of dry bulk materials or liquids, outdoor storage of materials or products, outdoor manufacturing and processing, onsite dust or particulate generating processes, on-site waste treatment, storage, or disposal, vehicle and equipment fueling, maintenance, and/or cleaning, roofs or other surfaces exposed to air emissions from a manufacturing building or a process area, and roofs or other surfaces composed of materials that may be mobilized by stormwater as required by these conditions.

7. Manke's SWPPP does not comply with Condition S3.B.2.c of the Permits because it does not include an adequate inventory of materials. The SWPPP does not include an inventory of materials that lists the types of materials handled at the site that potentially may be exposed to precipitation or runoff and that could result in stormwater pollution, a short narrative for material describing the potential for the pollutants to be present in stormwater discharge that is updated when data becomes available to verify the presence or absence of the pollutants, a narrative description of any potential sources of pollutants from past activities, materials and spills that were previously handled, treated, stored, or disposed of in a manner to allow ongoing exposure to stormwater as required. The SWPPP does not include the method and location of on-site storage or disposal of such materials and a list of significant spills and significant leaks of toxic or hazardous pollutants as these permit conditions require.

8. Manke's SWPPP does not comply with Condition S3.B.3 of the Permits because it does not identify specific individuals by name or title whose responsibilities include SWPPP development, implementation, maintenance and modification.

9. Condition S3.B.4 of the 2010 Permit required that permittees include in their SWPPPs and implement certain mandatory BMPs no later than July 1, 2010 unless site conditions render the BMP unnecessary, infeasible, or an alternative and equally effective BMP is provided. Condition S3.B.4 of the 2015 Permit also requires that permittees include in their SWPPPs and implement mandatory BMPs subject to the same conditions. Manke is in violation of this requirement because it has failed to include in its SWPPP and implement the mandatory BMPs of the Permits.

10. Condition S3.B.4.b.i.3.b of the Permits requires Manke's SWPPP to include BMPs to maintain vaults, catch basins and other stormwater management features in accordance with the Maintenance Standards set forth in the applicable Stormwater Management Manual (in Manke's case, the manual for Western Washington ("SWMMWW")), other approved guidance documents, demonstrably equivalent BMPs, or an Operations and Maintenance Manual submitted to Ecology. Volume IV of the SWMMWW provides applicable BMPs for the maintenance of stormwater drainage and treatment systems, including conveyance systems, vaults, catch basins and others. *See* SWMMWW at S417. Those applicable BMPs require Manke to dispose of sediments and liquids from the catch basins in compliance with "Recommendations for Management of Street Wastes" described in Appendix IV-G" of SWMMWW Volume IV. *Id.*

Those recommendations in turn provide a "required order of preference, for disposal of catch basin decant liquid and water removed from stormwater treatment facilities." SWMMWW Appendix IV-G. The first required preference is to discharge "catch basin decant liquids to a municipal sanitary sewer connected to a Public Owned Treatment Works [POTW]," subject to all required approvals from the sewer authority. Second, only if this first preference is "not available," may Manke discharge such liquid into a stormwater treatment BMP, subject to additional specified conditions. Finally, the least preferred option specifies conditions for Manke to return water removed from its stormwater ponds, vaults and oversized catch basins to the stormwater system, which is otherwise prohibited. SWMMWW Appendix IV-G. Under that last option, (1) operators may discharge clear water removed from a stormwater treatment structure directly to a down gradient cell of a treatment pond or into the storm sewer system; (2) turbid water may be discharged back into the structure it was removed from if the removed water has been stored in a clean container and there will be no discharge for at least 24 hours; and (3) the storm sewer system owner/operator must approve the discharge.

Manke violates this permit condition because its SWPPP does not specify these BMPs, nor does Manke dispose of its catch basin/vault liquid consistent with these BMPs. For example, on January 20, 2017, Soundkeeper observed Manke pumping turbid, cloudy and discolored water into a stormwater ditch along Marine View Dr., likely from a stormwater vault, catch basin or swale. Soundkeeper observed this near "PS-01," as labelled on a site map dated February 1, 2012 (prepared by Sitts & Hill Engineers, Inc.). On information and belief, Manke pumps liquid into the roadside ditch each and every time it disposes this liquid. Manke does not discharge these liquids to a POTW, even though it is available and Manke does not return this liquid to a stormwater treatment BMP. Moreover, the liquid Manke pumps to the roadside ditch is not "clear water," the turbid water was not stored in a clean container or held for at least 24 hours before discharge, and Manke does not have approval from the owner/operator of the roadside ditch and the storm sewer system connected to it. These violations are reasonably likely to continue.

11. Manke's SWPPP does not comply with Condition S3.B.4.b.i of the Permits because it does not include required operational source control BMPs in the following categories: good housekeeping (including definition of ongoing maintenance and cleanup of areas that may contribute pollutants to stormwater discharges, and a schedule/frequency for

each housekeeping task); preventive maintenance (including BMPs to inspect and maintain stormwater drainage, source controls, treatment systems, and plant equipment and systems, and the schedule/frequency for each task); spill prevention and emergency cleanup plan (including BMPs to prevent spills that can contaminate stormwater, for material handling procedures, storage requirements, cleanup equipment and procedures, and spill logs); employee training (including an overview of what is in the SWPPP, how employees make a difference in complying with the SWPPP, spill response procedures, good housekeeping, maintenance requirements, and material management practices, how training will be conducted, the frequency/schedule of training, and a log of the dates on which specific employees received training); inspections and recordkeeping (including documentation of procedures to ensure compliance with permit requirements for inspections and recordkeeping, including identification of personnel who conduct inspections, provision of a tracking or follow-up procedure to ensure that a report is prepared and appropriate action taken in response to visual monitoring, definition of how Manke will comply with signature and record retention requirements, and certification of compliance with the SWPPP and Permit).

12. Manke's SWPPP does not comply with Condition S3.B.4.b.i.7 of the Permits because it does not include measures to identify and eliminate the discharge of process wastewater, domestic wastewater, noncontact cooling water, and other illicit discharges to stormwater sewers, or to surface waters and ground waters of the state.

13. Manke's SWPPP does not comply with Condition S3.B.4.b.ii of the Permits because it does not include required structural source control BMPs to minimize the exposure of manufacturing, processing, and material storage areas to rain, snow, snowmelt, and runoff. Manke's SWPPP does not comply with Condition S3.B.4.b.iii of the Permits because it does not include treatment BMPs as required.

14. Manke's SWPPP fails to comply with Condition S3.B.4.b.v of the Permits because it does not include BMPs to prevent the erosion of soils or other earthen materials and prevent off-site sedimentation and violations of water quality standards.

15. Manke's SWPPP fails to satisfy the requirements of Condition S3.B.5 of the Permits because it fails to include a stormwater sampling plan as required. The SWPPP does not include a sampling plan that identifies points of discharge to surface waters, storm sewers, or discrete ground water infiltration locations, documents why each discharge point is not sampled, identifies each sampling point by its unique identifying number, identifies staff responsible for conducting stormwater sampling, specifies procedures for sampling collection and handling, specifies procedures for sending samples to the a laboratory, identifies parameters for analysis, holding times and preservatives, laboratory quantization levels, and analytical methods, and that specifies the procedure for submitting the results to Ecology.

### **III. MONITORING AND REPORTING VIOLATIONS.**

#### **A. Failure to Collect Quarterly Samples.**

Condition S4.B of the Permits requires Manke to collect a sample of its stormwater discharge once during every calendar quarter. Conditions S3.B.5.b and S4.B.2.c of the Permits require Manke to collect stormwater samples at each distinct point of discharge offsite except for substantially identical outfalls, in which case only one of the substantially identical outfalls must be sampled. These conditions set forth sample collection criteria, but require the collection of a sample even if the criteria cannot be met. On information and belief, the facility has at least five distinct points of discharge off-site: Outfall 001, Outfall 002, Outfall 004, Outfall 005, and Outfall 006. On information and belief, there are additional unnamed distinct discharge points.

Manke violated these requirements by failing to collect stormwater samples at any of its discharge points during the third quarter of 2012, third quarter of 2013, fourth quarter of 2013, first quarter of 2015 (except for Outfall 001), second quarter of 2015, third quarter of 2015, fourth quarter of 2015, first quarter of 2016, second quarter of 2016, third quarter of 2016, and fourth quarter of 2016.

Moreover, Manke violated these requirements by failing to collect stormwater samples at Outfall 002 during the following additional quarters: first quarter of 2012, second quarter of 2012, fourth quarter of 2012, first quarter of 2013, second quarter of 2013, first quarter of 2014, second quarter of 2014, third quarter of 2014, and fourth quarter of 2014.

In addition, on information and belief, Manke violated these requirements by failing to collect stormwater samples at any outfall where stormwater leaves the “new logyard across Marine View Drive,” as referred to in the Department of Ecology’s report from the January 14, 2016 facility inspection report (hereafter the “new logyard”). On information and belief, Manke has also violated and continues to violate these conditions because it does not sample other distinct points of discharge off-site.

These violations have occurred and continue to occur each and every quarter during the last five years that Manke was and is required to sample its stormwater discharges, including the quarters in which it collected stormwater discharge samples from some, but not each, point of discharge. These violations will continue until Manke commences monitoring all distinct points of discharge.

Finally, Manke also violated these requirements by pumping stormwater through a hose from catch basins and/or stormwater vaults at the facility to the stormwater ditch along Marine View Drive, without ever collecting samples of or analyzing these discharges. These violations have occurred and continue to occur each and every quarter during the last five years that Manke pumped stormwater off-site in this manner.

#### **B. Failure to Analyze Quarterly Samples.**

Condition S5.A.1 of the Permits requires Manke to analyze stormwater samples collected quarterly for turbidity, pH, total copper, and total zinc. In addition, because the facility's activity is classified under Standard Industrial Classification (SIC) codes 2421 and 2411 (Timber Products Industry), Condition S5.B of the Permits requires Manke to analyze stormwater samples for COD and TSS. *See also* 2015 Permit Condition S6.C.2, Table 7 (requiring samples for TSS with a benchmark value of 30 mg/L because the facility discharges to a Puget Sound Sediment Cleanup Site).

Manke violated these conditions by failing to analyze stormwater samples as described in Table 5 below:

**Table 5 – Parameters Not Analyzed**

<b>Monitoring Period (outfall)</b>	<b>Parameters Not Analyzed</b>
1st Quarter 2012 (004)	COD, TSS
1st Quarter 2012 (005)	COD, TSS
1st Quarter 2012 (006)	TSS
2nd Quarter 2012 (001)	TSS
2nd Quarter 2012 (004)	TSS
2nd Quarter 2012 (005)	TSS
4th Quarter 2012 (001)	TSS
4th Quarter 2012 (004)	TSS
4th Quarter 2012 (005)	TSS
2nd Quarter 2013 (001)	TSS
2nd Quarter 2013 (005)	TSS
1st Quarter 2014 (004)	Zinc, Copper
2nd Quarter 2014 (004)	COD
3rd Quarter 2014 (004)	Zinc
3rd Quarter 2014 (005)	TSS
4th Quarter 2014 (004)	TSS
4th Quarter 2014 (005)	TSS

### **C. Failure to Timely Submit Discharge Monitoring Reports.**

Condition S9.A of the Permits requires Manke to use DMR forms provided or approved by Ecology to summarize, report and submit monitoring data to Ecology. For each monitoring period (calendar quarter) a DMR must be completed and submitted to Ecology not later than 45 days after the end of the monitoring period. Manke has violated these conditions by failing to submit a DMR for Outfall 001 within the time prescribed for the third quarter of 2013, fourth quarter of 2013, fourth quarter of 2015, first quarter of 2016, second quarter of 2016, third quarter of 2016, and fourth quarter of 2015.

Manke has violated these conditions by failing to submit a DMR for Outfall 002 within the time prescribed for the second quarter of 2012, third quarter of 2013, fourth quarter of 2013, first quarter of 2015, second quarter of 2015, third quarter of 2015, fourth quarter of

2015, first quarter of 2016, second quarter of 2016, third quarter of 2016, and fourth quarter of 2016.

Manke has violated these conditions by failing to submit a DMR for Outfall 004 within the time prescribed for the third quarter of 2013, fourth quarter of 2013, first quarter of 2015, second quarter of 2015, third quarter of 2015, fourth quarter of 2015, first quarter of 2016, second quarter of 2016, third quarter of 2016, and fourth quarter of 2016.

Manke has violated these conditions by failing to submit a DMR for Outfall 005 within the time prescribed for the third quarter of 2013, fourth quarter of 2013, first quarter of 2015, second quarter of 2015, third quarter of 2015, fourth quarter of 2015, first quarter of 2016, second quarter of 2016, third quarter of 2016, and fourth quarter of 2016.

Manke has violated these conditions by failing to submit a DMR for Outfall 006 within the time prescribed for the third quarter of 2013, fourth quarter of 2013, first quarter of 2015, second quarter of 2015, third quarter of 2015, fourth quarter of 2015, first quarter of 2016, second quarter of 2016, third quarter of 2016, and fourth quarter of 2016.

Finally, Manke has violated these conditions by failing to ever submit a DMR for any discharges from the new logyard, from hoses used to pump water out of catch basins and/or stormwater vaults, and for any other discrete point of discharge at the facility.

#### **D. Failure to Comply with Visual Monitoring Requirements.**

Condition S7.A of the Permits requires that monthly visual inspection be conducted at the facility by qualified personnel. Each inspection is to include observations made at stormwater sampling locations and areas where stormwater associated with industrial activity is discharged, observations for the presence of floating materials, visible oil sheen, discoloration, turbidity, odor, etc. in the stormwater discharges, observations for the presence of illicit discharges, a verification that the descriptions of potential pollutant sources required by the permit are accurate, a verification that the site map in the SWPPP reflects current conditions, and an assessment of all BMPs that have been implemented (noting the effectiveness of the BMPs inspected, the locations of BMPs that need maintenance, the reason maintenance is needed and a schedule for maintenance, and locations where additional or different BMPs are needed).

Condition S7.C of the Permits requires that Manke record the results of each inspection in an inspection report or checklist that is maintained on-site and that documents the observations, verifications, and assessments required. The report/checklist must include the time and date of the inspection, the locations inspected, a statement that, in the judgment of the person conducting the inspection and the responsible corporate officer, the facility is either in compliance or out of compliance with the SWPPP and the Permits, a summary report and schedule of implementation of the remedial actions that Manke plans to take if the site inspection indicates that the facility is out of compliance, the name, title, signature and certification of the person conducting the facility inspection, and a certification and signature of the responsible corporate officer or a duly authorized representative.

Manke is in violation of these requirements of Condition S7 of the Permits because, during the last five years, it has failed to conduct each of the requisite visual monitoring and inspections, failed to prepare and maintain the requisite inspection reports or checklists, and failed to make the requisite certifications and summaries.

#### **IV. CORRECTIVE ACTION VIOLATIONS.**

##### **A. Violations of the Level One Requirements.**

Condition S8.B of the Permits requires Manke take specified actions, called a “Level One Corrective Action,” each time quarterly stormwater sample results exceed a benchmark value or are outside the benchmark range for pH.

As described by Condition S8.B of the Permits, a Level One Corrective Action requires Manke: (1) review the SWPPP for the facility and ensure that it fully complies with Condition S3 of the Permits and contains the correct BMPs from the applicable Stormwater Management Manual; (2) make appropriate revisions to the SWPPP to include additional operational source control BMPs with the goal of achieving the applicable benchmark values in future discharges and sign and certify the revised SWPPP in accordance with Condition S3.A.6 of the Permits; and (3) summarize the Level One Corrective Action in the Annual Report required under Condition S9.B of the Permits. Condition S8.B.4 of the Permits requires Manke implement the revised SWPPP as soon as possible, and no later than the DMR due date for the quarter the benchmark was exceeded.

Condition S5.A and Table 2 of the Permits establish the following benchmarks: turbidity 25 NTU; pH 5 – 9 SU; total copper 14 µg/L; and total zinc 117 µg/L. Condition S5.B and Table 3 of the Permits establish the following additional benchmarks for Standard Industrial Classification (SIC) codes 2421 and 2411 that are applicable to Manke: COD 120 mg/L; and TSS 100 mg/L. Moreover, because the facility discharges to a Puget Sound Sediment Cleanup Site, since January 2, 2015, Condition S6.C.2 and Table 7 set the benchmark for TSS at 30 mg/L.

Manke has violated the requirements of the Permits described above by failing to conduct a Level One Corrective Action in accordance with permit conditions, including the required review, revision and certification of the SWPPP, the required implementation of additional BMPs, and the required summarization in the annual report each time since January 1, 2012, its quarterly stormwater sampling results were greater than a benchmark or outside the benchmark range for pH, including the benchmark excursions listed in Tables 1 through 4 above.

##### **B. Violations of the Level Two Requirements.**

Condition S8.C of the Permits requires Manke take specified actions, called a “Level Two Corrective Action,” each time quarterly stormwater sample results exceed an applicable

benchmark value or are outside the benchmark range for pH for any two quarters during a calendar year.

As described by Condition S8.C of the Permits, a Level Two Corrective Action requires Manke: (1) review the SWPPP for the facility and ensure that it fully complies with Condition S3 of the Permits; (2) make appropriate revisions to the SWPPP to include additional structural source control BMPs with the goal of achieving the applicable benchmark value(s) in future discharges and sign and certify the revised SWPPP in accordance with Condition S3.A.6 of the Permits; and (3) summarize the Level Two Corrective Action (planned or take) in the Annual Report required under Condition S9.B of the Permits. Condition S8.C.4 of the Permits requires Manke implement the revised SWPPP according to condition S3 of the Permits and the applicable stormwater management manual as soon as possible, and no later than September 30th of the following year.

The Permits establish the benchmarks applicable to Manke described in section IV.A of this notice of intent to sue letter.

Manke has violated the requirements of the Permits described above by failing to conduct a Level Two Corrective Action in accordance with permit conditions, including the required review, revision and certification of the SWPPP, the required implementation of additional BMPs, including additional structural source control BMPs, and the required summarization in the annual report each time since January 1, 2012, its quarterly stormwater sampling results were greater than a benchmark or outside the benchmark range for pH for any two quarters during a calendar year. As indicated in Tables 1 through 4 above, these violations include, but are not limited to, Manke's failure to fulfill these obligations for zinc and copper triggered by its stormwater sampling during calendar year 2012, and for COD triggered by its stormwater sampling during calendar year 2013.

In addition, Condition S8.A of the Permits requires Manke to implement any applicable Level Two responses required by the previous ISGP. On information and belief, Manke failed to fulfill these obligations for the Level Two requirements triggered for turbidity during calendar year 2010 and 2011; Level Two requirements triggered for zinc during calendar year 2010; and Level Two requirements for TSS triggered during calendar year 2011.

### **C. Violations of the Level Three Requirements.**

Condition S8.D of the Permits requires Manke take specified actions, called a "Level Three Corrective Action," each time quarterly stormwater sample results exceed an applicable benchmark value or are outside the benchmark range for pH for any three quarters during a calendar year.

As described by Condition S8.D of the Permits, a Level Three Corrective Action requires Manke: (1) review the SWPPP for the facility and ensure that it fully complies with Condition S3 of the Permits; (2) make appropriate revisions to the SWPPP to include additional treatment BMPs with the goal of achieving the applicable benchmark value(s) in

future discharges and additional operational and/or structural source control BMPs if necessary for proper function and maintenance of treatment BMPs, and sign and certify the revised SWPPP in accordance with Condition S3.A.6 of the Permits; and (3) summarize the Level Three Corrective Action (planned or take) in the Annual Report required under Condition S9.B of the Permits, including information on how monitoring, assessment, or evaluation information was (or will be) used to determine whether existing treatment BMPs will be modified/enhanced, or if new/additional treatment BMPs will be installed. Condition S8.D.2.b of the Permits requires that a licensed professional engineer, geologist, hydrogeologist, or certified professional in storm water quality must design and stamp the portion of the SWPPP that addresses stormwater treatment structures or processes.

Condition S8.D.3 of the Permits requires that, before installing BMPs that require the site-specific design or sizing of structures, equipment, or processes to collect, convey, treat, reclaim, or dispose of industrial stormwater, the Manke submit an engineering report, plans, and specifications, and an operations and maintenance manual to Ecology for review in accordance with chapter 173-204 of the Washington Administrative Code. The engineering report must be submitted no later than the May 15 prior to the Level Three Corrective Action Deadline. The plans and specifications and the operations and maintenance manual must be submitted to Ecology at least 30 days before construction/installation.

Condition S8.D.5 of the Permits requires Manke fully implement the revised SWPPP according to condition S3 of the Permits and the applicable stormwater management manual as soon as possible, and no later than September 30th of the following year.

The Permits establish the benchmarks applicable to Manke described in section IV.A of this notice of intent to sue letter.

Manke has violated the requirements of the Permits described above by failing to conduct a Level Three Corrective Action in accordance with permit conditions, including the required review, revision and certification of the SWPPP, including the requirement to have a specified professional design and stamp the portion of the SWPPP pertaining to treatment, the required implementation of additional BMPs, including additional treatment BMPs, the required submission of an engineering report, plans, specifications, and an operations and maintenance plan, and the required summarization in the annual report each time since January 1, 2012, its quarterly stormwater sampling results were greater than a benchmark or outside the benchmark range for pH for any three quarters during a calendar year. As indicated in Tables 1 through 4 above, these violations include, but are not limited to, Manke's failure to fulfill these obligations for COD triggered by its stormwater sampling during calendar year 2012 and 2014; Manke's failure to fulfill these obligations for turbidity triggered during calendar year 2014; and Manke's failure to fulfill these obligations for copper triggered during calendar year 2014. By letter dated October 16, 2015, Ecology approved a two-phase treatment plan for Outfalls 001 and 002, requiring the complete installation and operation of the treatment system described in Manke's engineering report by September 30, 2016. On information and belief, Manke failed to meet this deadline.

In addition, Condition S8.A of the Permits requires Manke to implement any applicable Level Three responses required by the previous ISGP. On information and belief, Manke failed to fulfill these obligations for the Level Three requirements triggered for zinc during calendar year 2010 and 2011; Level Three requirements triggered for copper during calendar year 2010 and 2011; Level Three requirements triggered for turbidity during calendar year 2010; and Level Three requirements for COD triggered during calendar year 2011. Moreover, any purported treatment BMPs implemented in any of these years were not reasonably expected to achieve the applicable benchmark values in future discharges and did not meet the AKART standard.

## V. VIOLATIONS OF THE ANNUAL REPORT REQUIREMENTS.

Condition S9.B of the Permits requires Manke to submit an accurate and complete annual report to Ecology no later than May 15 of each year. The annual report must include corrective action documentation as required in Condition S8.B – D of the Permits. If a corrective action is not yet completed at the time of submission of the annual report, Manke must describe the status of any outstanding corrective action. Specific information to be included in the annual report is identification of the conditions triggering the need for corrective action, description of the problem and identification of dates discovered, summary of any Level 1, 2, or 3 corrective actions completed during the previous calendar year, including the dates corrective actions completed, and description of the status of any Level 2 or 3 corrective actions triggered during the previous calendar year, including identification of the date Manke expects to complete corrective actions.

Manke has violated this condition. First, Manke did not submit an annual report for 2014 or 2015 at all. Second, the annual reports that Manke did submit do not include all the required information and details.

The annual report submitted by Manke for 2011 (in May 2012) does not describe problems identified at the facility during its monthly visual inspections. The 2011 annual report also does not adequately describe additional treatment BMPs that Manke implemented or planned to implement as part of its Level Three corrective actions for copper that was triggered at Outfall 001, and for COD and zinc that were triggered at Outfall 006. The 2011 annual report also does not adequately describe the additional structural source control BMPs that were to be part of Manke's Level Two corrective actions for turbidity and TSS that were triggered at Outfall 006.

The annual report submitted by Manke for 2012 (in July 2013) does not describe problems identified at the facility, as required, including those identified by Ecology following facility inspections on January 31, 2012 and August 28, 2012. The 2012 annual report also does not adequately describe additional structural source control BMPs that Manke implemented or planned to implement as part of its Level Two corrective actions for Zn that were triggered at Outfall 001, and does not adequately describe additional treatment BMPs as part of Manke's Level Three corrective actions for COD that was triggered at Outfall 006.

The annual report submitted by Manke for 2013 (in May 2014) does not describe problems identified at the facility during its monthly visual inspections. The 2013 annual report also does not describe additional structural source control BMPs that Manke implemented or planned to implement as part of its Level Two corrective actions that were triggered for copper at Outfall 001 and turbidity and zinc at Outfall 006, and does not adequately describe additional treatment BMPs for Manke's Level Three corrective actions that were triggered for COD at Outfall 006.

## **VI. VIOLATIONS OF THE RECORDKEEPING REQUIREMENTS.**

### **A. Failure to Record Information.**

Condition S4.B.3 of the Permits requires Manke record and retain specified information for each stormwater sample taken, including the sample date and time, a notation describing if Manke collected the sample within the first 30 minutes of stormwater discharge event, an explanation of why Manke could not collect a sample within the first 30 minutes of a stormwater discharge event, the sample location, method of sampling and of preservation, and the individual performing the sampling. Upon information and belief, Manke is in violation of these conditions as it has not recorded each of these specified items for each sample taken during the last five years.

### **B. Failure to Retain Records.**

Condition S9.C of the Permits requires Manke to retain for a minimum of five years a copy of the current Permit, a copy of Manke's coverage letter, records of all sampling information, inspection reports including required documentation, any other documentation of compliance with permit requirements, all equipment calibration records, all BMP maintenance records, all original recordings for continuous sampling instrumentation, copies of all laboratory results, copies of all required reports, and records of all data used to complete the application for the Permit. Upon information and belief, Manke is in violation of these conditions because it has failed to retain records of such information, reports, and other documentation during the last five years.

## **VII. FAILURE TO REPORT PERMIT VIOLATIONS.**

Condition S9.E of the Permits requires Manke to take certain actions in the event Manke is unable to comply with any of the terms and conditions of the Permits which may endanger human health or the environment, or exceed any numeric effluent limitation in the permit. In such circumstances, Manke must immediately take action to minimize potential pollution or otherwise stop the noncompliance and correct the problem, and Manke must immediately notify the appropriate Ecology regional office of the failure to comply. Manke must then submit a detailed written report to Ecology, including specified details, within 5 days of the time Manke became aware of the circumstances unless Ecology requests an earlier submission.

On information and belief, Manke routinely violates these requirements, including each and every time Manke failed to comply with the corrective action requirements described in section IV of this notice of intent to sue, and each and every time Manke discharged stormwater with concentrations of pollutants in excess of the Permit benchmarks, as described in Tables 1 through 4, above. All these violations may endanger human health or the environment.

### **VIII. VIOLATIONS OF PUGET SOUND SEDIEMENT CLEANUP SITE REQUIREMENTS.**

The facility discharges stormwater to the Hylebos Waterway, which is a Puget Sound Sediment Cleanup Site. Thus, under 2015 Permit Condition S6.C.2.d, Manke needed to remove accumulated solids from storm drain lines (including inlets, catch basins, sumps, conveyance lines, and oil/water separators) at least once prior to October 1, 2016. Manke also needed to conduct line cleaning operations using BMPs to prevent discharges of storm drain solids to surface waters of the state. Under this condition, removed storm drain solids and liquids needed to be disposed of in accordance with applicable laws and regulations and documented in the SWPPP. On information and belief, Manke failed to comply with these requirements by October 1, 2016, and have still not complied.

Under 2015 Permit Condition S6.C.2.e, Manke needed to sample and analyze storm drain solids in accordance with Table 8 of the 2015 Permit at least once prior to October 1, 2016. Storm drain solids must be collected/sampled from representative catch basins, sumps, pipes, or other features within the storm drain system that corresponds to the discharge point(s) where TSS samples are collected per 2015 Permit Condition S6.C. Samples must be representative of the storm drain solids generated and accumulated in the facility's drainage system. Under 2015 Permit Condition S6.C.2.f, all storm drain solids sampling data must be reported to Ecology on a Solids Monitoring Report (SMR) no later than the DMR due date for the reporting period in which the solids were sampled, and a copy of the lab report shall be submitted to Ecology with the SMR. On information and belief, Manke failed to comply with all these requirements before October 1, 2016 and have continued to fail to comply.

### **IX. FAILURE TO APPLY FOR MODIFICAITON OF PERMIT COVERAGE.**

Condition S2.B of the Permits requires a permittee anticipating a significant process to submit a complete Modification of Coverage Form to Ecology. The permittee must apply at least 60 days before implementing a significant process change, complete the public notice requirements in WAC 173-226-130(d) and comply with SEPA. Appendix 2 of the Permits defines "significant process change" to mean any modification of the facility that would result in either (1) the addition of different pollutants in a significant amount to the facility's discharge; (2) the increase of pollutants in the stormwater discharge by a significant amount; (3) the addition of a new industrial activity that was not previously covered; or (4) the additional of additional impervious surface or acreage such that stormwater discharge would be increased by 25% or more.

Manke expanded its facility into a “new logyard across Marine View Drive” (described by Ecology in its report following the January 14, 2016 facility inspection) without completing an application for Modification of Coverage, as required. On information and belief, Manke violated these conditions because this expansion constitutes a significant process change as it increased pollutants in the stormwater discharge by a significant amount, added acreage such that stormwater discharge was increased by at least 25%, it added new industrial activities, and because the new logyard contains contaminated soils that causes the addition of different toxic pollutants in a significant amount to the discharge.

## X. PROHIBITED DISCHARGES.

Condition S5.E. of the Permits prohibits illicit discharges and the discharge of process wastewater (including stormwater that comes with process wastewater). Appendix 2 of the Permits defines “illicit discharges” to include “any *discharge* that is not composed entirely of *stormwater* except (1) discharges authorized pursuant to a separate NPDES permit, or (2) conditionally authorized non-stormwater discharge identified in Condition S5.D” (italics original).

Manke violates these Permit conditions each and every time it pumps liquid into the ditch running along Marine View Drive that has comeled with process water and/or leachate. For example, on January 20, 2017, Soundkeeper observed Manke pumping turbid, cloudy and discolored water into this ditch through a hose, liquid which on information and belief comeled with process water and/or leachate. These violations are reasonably likely to recur.

In addition, Condition S5.F.2 of the Permits requires Manke to manage stormwater to prevent the discharge of trash and floating debris. Manke has violated this condition each and every day over the past five years because it does not manage its operations to prevent these discharges. Manke discharges solid debris including wood chips and sawdust from the facility to catch basins and a stormwater ditch along Marine View Drive due to vehicles tracking these materials onto the road, aerial deposition of the material from the facility, and failing to contain these materials inside the facility, which are stored in large outdoor piles on site. Moreover, these discharges are illicit discharges under Condition S5.E of the Permits, additional violations that occur each and every day on which there is at least 0.1 inch of precipitation. Precipitation data is attached to this letter identifying these days.

## XI. REQUEST FOR SWPPP.

Pursuant to Condition S9.F of the 2015 Permit, Soundkeeper hereby requests that Manke Lumber Co., Inc. provide a copy of, or access to, its SWPPP complete with all incorporated plans, monitoring reports, checklists, and training and inspection logs. The copy of the SWPPP and any other communications about this request should be directed to the undersigned at the letterhead address.

Should Manke fail to provide the requested complete copy of, or access to, its SWPPP as required by Condition S9.F of the 2015 Permit, it will be in violation of that condition, which violation shall also be subject to this notice of intent to sue and any ensuing lawsuit.

## XII. CONCLUSION.

The above-described violations reflect those indicated by the information currently available to Soundkeeper. These violations are ongoing. Soundkeeper intends to sue for all violations, including those yet to be uncovered and those committed after the date of this Notice of Intent to Sue.

Under Section 309(d) of the CWA, 33 USC § 1319(d), each of the above-described violations subjects the violator to a penalty of up to \$37,500 per day for each violation that occurred before November 2, 2015, and \$51,570 per day for each violation that occurred thereafter. In addition to civil penalties, Soundkeeper will seek injunctive relief to prevent further violations under Sections 505(a) and (d) of the CWA, 33 USC § 1365(a) and (d), and such other relief as is permitted by law. Also, Section 505(d) of the CWA, 33 USC § 1365(d), permits prevailing parties to recover costs, including attorney's fees.

Soundkeeper believes that this NOTICE OF INTENT TO SUE sufficiently states grounds for filing suit. We intend, at the close of the 60-day notice period, or shortly thereafter, to file a citizen suit against Manke Lumber Co., Inc. under Section 505(a) of the Clean Water Act for violations.

During the 60-day notice period, we would be willing to discuss effective remedies for the violations addressed in this letter and settlement terms. If you wish to pursue such discussions in the absence of litigation, we suggest that you initiate those discussions within 10 days of receiving this notice so that a meeting can be arranged and so that negotiations may be completed promptly. We do not intend to delay the filing of a complaint if discussions are continuing when the notice period ends.

Very truly yours,

SMITH & LOWNEY, PLLC

By:   
Marc Zemel

cc: Catherine McCabe, Acting Administrator, U.S. EPA  
Michelle Pirzadeh, Acting Region 10 Administrator, U.S. EPA  
Maia Bellon, Director, Washington Department of Ecology  
Charles Manke, Registered Agent (1717 Marine View Dr., Tacoma, WA 98422)

**Record of Climatological Observations**  
These data are quality controlled and may not be  
Identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e - i m i n a r y	M o n a t h	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)		
			24 hrs. ending at observation time		at O	24 Hour Amounts ending at observation time		At Obs Time	4 in depth		8 in depth		Ground Cover (see *)	
			Max.	Min.		F	Snow, ice pellets, hail (in)	F	Snow, ice pellets, hail (in)	24 Hour Wind Moveme nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2012	1	1	51	38	47	0.01								
2012	1	2	52	35	50	0.09								
2012	1	3	54	42	50	0.15								
2012	1	4	56	43	51	0.46								
2012	1	5	53	42	44	0.24								
2012	1	6	44	36	40	0.02								
2012	1	7	46	37	45	0.02								
2012	1	8	50	36	49	0.01								
2012	1	9	51	41	49	0.01								
2012	1	10	49	39	43	0.25								
2012	1	11	44	30	42	0.00								
2012	1	12	44	29	43	0.00								
2012	1	13	44	27	40	0.00								
2012	1	14	41	36	38	0.28								
2012	1	15	38	32	33	0.10								
2012	1	16	37	30	36	0.08								
2012	1	17	38	35	36	0.45								
2012	1	18	37	30	31	0.14								
2012	1	19	31	29	30	0.30								
2012	1	20	36	29	36	0.96								
2012	1	21	46	34	41	0.36								
2012	1	22	45	34	44	0.16								
2012	1	23	50	34	47	0.05								
2012	1	24	49	36	44	0.46								
2012	1	25	51	41	47	0.69								
2012	1	26	51	41	44	0.21								
2012	1	27	45	29	44	0.01								
2012	1	28	44	32	43	0.01								
2012	1	29	50	37	50	0.95								
2012	1	30	50	43	48	0.57								
2012	1	31	52	44	50	0.01								
		Summary	46	36		7.05								

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brone grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mulch; 0=Unknown

“\*” This data value failed one of NCDC's quality control tests.

“T” values in the Precipitation category above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

Elev: 25 ft. Lat: 47°24' N Lon: 122°41' W

Station: TACOMA NUMBER 1, WA US GHCND-USC00458278

## Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p t a t i o n  M o n t h a r y	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)		
		24 hrs. ending at observation time	at Obs	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	4 in depth	8 in depth
		Max.	Min.	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	Snow, ice pellets, hail etc. (in)	Max.	Min.	Max.	Min.
2012	2	1	50	43	48	0.45				
2012	2	2	49	37	47	0.01				
2012	2	3	57	32	55	0.00				
2012	2	4	55	33	54	0.01				
2012	2	5	54	32	50	0.00				
2012	2	6	60	30	53	0.00				
2012	2	7	59	40	56	0.00				
2012	2	8	59	39	47	0.19				
2012	2	9	51	44	48	0.15				
2012	2	10	54	44	52	0.06				
2012	2	11	53	45	48	0.10				
2012	2	12	48	42	47	0.01				
2012	2	13	49	42	48	0.26				
2012	2	14	48	40	46	0.09				
2012	2	15	48	38	46	0.01				
2012	2	16	48	37	47	0.10				
2012	2	17	51	42	48	0.27				
2012	2	18	48	39	42	0.78				
2012	2	19	45	38	45	0.01				
2012	2	20	46	35	46	0.00				
2012	2	21	52	46	51	0.12				
2012	2	22	51	46	48	0.00				
2012	2	23	51	39	46	0.00				
2012	2	24	48	42	45	0.08				
2012	2	25	46	40	44	0.23				
2012	2	26	45	36	41	0.01				
2012	2	27	45	31	44	0.00				
2012	2	28	45	32	45	0.01				
2012	2	29	45	36	40	0.19				
Summary		50	39			3.14	0			

The \*\*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

Ground Cover: 1=Grass; 2=alfalfa; 3=Baro Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mulch; 9=Unknown

\*\* This data value failed one of NCDC's quality control tests.

\*\*\* values in the precipitation category above indicate a TRACE value was recorded.

-A- values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h y  Y e a r a r y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)		
	24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	24 Hour Wind Movements (mi)		Amount of Evap. (in)	Ground Cover (see *)		Max. Min.
	M	D	a	y	Max.	Min.	Rain, melted snow, etc. (in)	F Snow, ice pellets, hail, ice on ground (in)	F Snow, ice pellets, hail, ice on ground (in)	Max.	Min.	
2012	3	1	46	35	45	0.10						
2012	3	2	46	38	44	0.09						
2012	3	3	53	43	52	0.02						
2012	3	4	53	48	51	0.00						
2012	3	5	51	41	45	0.37						
2012	3	6	46	32	42	0.60						
2012	3	7	48	30	47	0.00						
2012	3	8	60	31	58	0.00						
2012	3	9	59	37	49	0.00						
2012	3	10	49	45	46	0.15						
2012	3	11	47	37	37	0.73						
2012	3	12	50	37	45	0.15						
2012	3	13	45	33	39	0.77						
2012	3	14	47	34	44	0.15						
2012	3	15	55	42	46	0.66						
2012	3	16	51	40	50	0.46						
2012	3	17	50	35	49	0.41						
2012	3	18	50	38	41	0.05						
2012	3	19	47	32	44	0.05						
2012	3	20	47	39	41	0.31						
2012	3	21	48	36	46	0.23						
2012	3	22	52	35	51	0.33						
2012	3	23	54	34	53	0.00						
2012	3	24	55	42	54	0.00						
2012	3	25	57	36	54	0.00						
2012	3	26	57	44	57	0.00						
2012	3	27	58	44	54	0.04						
2012	3	28	57	47	50	0.04						
2012	3	29	50	45	47	0.85						
2012	3	30	52	43	48	0.76						
2012	3	31	50	38	46	0.33						
		Summary	51	38		7.65						0

The \*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, Cells indicate that data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren ground; 4=Brone grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 9=Unknown

"x" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multi day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
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 identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e - i m i n a r y	M o n t h	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
			24 hrs. ending at observation time	at O b s e	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move- nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2012	4	1	48	39	45	0.30				Min.
2012	4	2	64	41	64	0.05				
2012	4	3	65	42	50	0.18				
2012	4	4	53	37	45	0.02				
2012	4	5	51	39	47	0.14				
2012	4	6	54	39	54	0.01				
2012	4	7	57	34	57	0.00				
2012	4	8	66	47	64	0.00				
2012	4	9	66	45	66	0.00				
2012	4	10	66	48	66	0.00				
2012	4	11	67	49	53	0.12				
2012	4	12	57	44	54	0.03				
2012	4	13	56	39	56	0.00				
2012	4	14	61	39	60	0.00				
2012	4	15	62	46	59	0.00				
2012	4	16	59	48	54	0.45				
2012	4	17	54	41	49	0.05				
2012	4	18	57	44	54	0.12				
2012	4	19	57	43	52	0.09				
2012	4	20	56	46	56	0.83				
2012	4	21	63	45	62	0.00				
2012	4	22	67	49	66	0.00				
2012	4	23	70	52	68	0.00				
2012	4	24	69	52	59	0.00				
2012	4	25	64	51	63	0.10				
2012	4	26	63	46	54	0.70				
2012	4	27	63	43	55	0.09				
2012	4	28	59	46	59	0.02				
2012	4	29	60	50	57	0.00				
2012	4	30	59	46	51	0.45				
		Summary	60	44	3.75	0				

The “\*” flags in Preliminary indicate the data have not completed processing and quality-control and may not be identical to the original observation  
 Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Soil Ground; 4=Soil grass; 5=Soil; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

“S” This data value failed one of NCDC’s quality control tests.

“T” values in the Precipitation category above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.  
 Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47.247° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p i t a t i o n	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)			
			24 hrs. ending at observation time		at O	24 Hour Amounts ending 9 at observation time		b	At Obs Time		4 in depth		8 in depth		
			Max.	Min.		Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	a	F	Snow, ice pellets, hail, ice on ground (in)	i	f	Ground Cover (see *)	Max.	Min.
2012	5	1	53	44		52	0.12								
2012	5	2	55	42		54	0.01								
2012	5	3	56	45		48	0.53								
2012	5	4	57	45		56	0.18								
2012	5	5	58	42		57	0.01								
2012	5	6	60	42		60	0.00								
2012	5	7	70	44		70	0.00								
2012	5	8	72	51		68	0.00								
2012	5	9	68	45		60	0.00								
2012	5	10	60	41		57	0.00								
2012	5	11	61	42		60	0.00								
2012	5	12	72	43		72	0.00								
2012	5	13	73	48		71	0.00								
2012	5	14	77	52		77	0.00								
2012	5	15	78	51		71	0.00								
2012	5	16	74	53		69	0.00								
2012	5	17	69	46		63	0.00								
2012	5	18	65	47		61	0.00								
2012	5	19	65	43		63	0.00								
2012	5	20	65	52		55	0.15								
2012	5	21	61	53		61	0.68								
2012	5	22	62	49		54	0.40								
2012	5	23	58	48		57	0.12								
2012	5	24	60	49		59	0.01								
2012	5	25	68	47		68	0.00								
2012	5	26	73	48		73	0.02								
2012	5	27	73	53		62	0.00								
2012	5	28	64	52		60	0.01								
2012	5	29	63	47		61	0.00								
2012	5	30	64	53		64	0.00								
2012	5	31	66	54		66	0.10								
		Summary	65	47					2.34		0				

The \*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=grass; 2=fallow; 3=Bare Ground; 4=Snow; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mulch; Q=Unknown

\*"T" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SImetric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft Lat: 47.24° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e i m i n a r y	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)			
			24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	4 in depth		8 in depth		Ground Cover (see *)		
			Max.	Min.		Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i a g	Snow, ice pellets, hail, ice on ground (in)	Wind Move- nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	
2012	6	1	69	57	69	0.29									
2012	6	2	69	53	64	0.07									
2012	6	3	66	51	61	0.00									
2012	6	4	63	49	55	T									
2012	6	5	61	48	60	0.35									
2012	6	6	62	47	59	T									
2012	6	7	62	49	57	0.61									
2012	6	8	59	48	52	0.28									
2012	6	9	64	48	61	0.14									
2012	6	10	64	51	63	0.00									
2012	6	11	73	52	72	0.00									
2012	6	12	75	56	63	0.03									
2012	6	13	63	53	61	T									
2012	6	14	63	49	63	0.00									
2012	6	15	72	48	71	0.00									
2012	6	16	74	62	71	T									
2012	6	17	71	58	65	T									
2012	6	18	65	53	64	0.01									
2012	6	19	65	53	62	0.00									
2012	6	20	73	49	73	0.00									
2012	6	21	74	55	72	0.00									
2012	6	22	74	56	56	0.07									
2012	6	23	56	53	54	0.50									
2012	6	24	64	50	64	0.00									
2012	6	25	67	49	64	0.00									
2012	6	26	67	52	64	0.05									
2012	6	27	68	47	68	0.00									
2012	6	28	72	51	69	0.00									
2012	6	29	70	59	68	0.01									
2012	6	30	71	59	68	0.08									
		Summary	67	52	2.49	0									

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mud; 0=Unknown

“\*” This data value failed one of NCDC's quality control tests.

“T” values in the Precipitation Flag or the Snow Flag column indicate a TRACE value was recorded.

“A” values in the Precipitation Flag above indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard Imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h a y  Y e m n a n a r r y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)		
		24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending 9 at observation time		At Obs Time	4 in depth		8 in depth		Ground Cover (see *)	
		Max.	Min.		Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F Snow, ice pellets, hail, ice on ground (in)					Max.	Min.
2012	7	1	71	58	67	T							
2012	7	2	70	54	63	0.00							
2012	7	3	66	54	63	0.23							
2012	7	4	67	51	67	0.09							
2012	7	5	73	50	72	0.00							
2012	7	6	76	51	76	0.00							
2012	7	7	77	54	74	0.00							
2012	7	8	79	57	79	0.00							
2012	7	9	81	56	73	0.08							
2012	7	10	78	55	69	0.00							
2012	7	11	77	57	77	0.00							
2012	7	12	79	56	77	0.00							
2012	7	13	79	57	72	0.00							
2012	7	14	75	60	74	0.01							
2012	7	15	77	59	65	T							
2012	7	16	74	57	74	0.10							
2012	7	17	76	62	70	0.00							
2012	7	18	72	60	70	0.00							
2012	7	19	75	60	74	0.00							
2012	7	20	76	58	64	0.42							
2012	7	21	73	61	73	0.03							
2012	7	22	76	57	66	0.00							
2012	7	23	67	53	65	0.00							
2012	7	24	70	54	70	0.00							
2012	7	25	77	53	76	0.00							
2012	7	26	78	57	74	0.00							
2012	7	27	80	59	67	0.00							
2012	7	28	80	59	69	0.00							
2012	7	29	73	60	71	0.00							
2012	7	30	75	58	66	0.00							
2012	7	31	71	57	71	0.00							
Summary		75	57			0.87					0		

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren ground; 4=Soil; 5=Grass; 6=Straw mulch; 7=Bare mulch; 8=Bare muck; 9=Unknown

“S” This date value failed one of NCDC’s quality control tests.

“T” Values in the Precipitation category above indicate a TRACE value was recorded.

“A” Values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev. 25 ft. Lat: 37.247° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHND:USC00458278

**Record of Climatological Observations**  
 These data are quality controlled and may not be  
 identical to the original observations.  
 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p t i o n	M o n t h	D a y	Temperature (F)	Precipitation		Evaporation		Soil Temperature (F)	
				24 hrs. ending at observation time	24 Hour Amounts ending at observation time	At Obs Time	24 hour Wind Moveme nt (mi)	Amount of Evap. (in)	Ground Cover (see *)
P r e c i p t i o n	M o n t h	D a y	Temperature (F)	24 hrs. ending at observation time	24 Hour Amounts ending at observation time	At Obs Time	24 hour Wind Moveme nt (mi)	Amount of Evap. (in)	Ground Cover (see *)
				24 hrs. ending at observation time	24 Hour Amounts ending at observation time	At Obs Time	24 hour Wind Moveme nt (mi)	Amount of Evap. (in)	Ground Cover (see *)
2012	8	1	74	55	73	0.00			
2012	8	2	76	54	71	0.00			
2012	8	3	76	57	75	0.00			
2012	8	4	84	59	84	0.00			
2012	8	5	88	62	88	0.00			
2012	8	6	89	62	78	0.00			
2012	8	7	89	62	70	0.00			
2012	8	8	73	61	72	0.00			
2012	8	9	74	59	72	0.00			
2012	8	10	75	54	75	0.00			
2012	8	11	77	55	77	0.00			
2012	8	12	80	58	80	0.00			
2012	8	13	80	58	77	0.00			
2012	8	14	80	57	77	0.00			
2012	8	15	81	59	81	0.00			
2012	8	16	86	60	86	0.00			
2012	8	17	87	61	84	0.00			
2012	8	18	87	60	66	0.00			
2012	8	19	72	61	72	0.00			
2012	8	20	75	58	74	0.00			
2012	8	21	77	58	72	0.00			
2012	8	22	47	70	0.00				
2012	8	23	71	58	71	0.00			
2012	8	24	72	50	69	0.00			
2012	8	25	75	50	75	0.00			
2012	8	26	77	55	67	0.00			
2012	8	27	74	58	74	0.00			
2012	8	28	75	57	72	0.00			
2012	8	29	73	57	73	0.00			
2012	8	30							
2012	8	31	69	47	68	0.00			
		Summary	78	57		0.00			

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Silk; 3=Barren Ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mulch; 0=Unknown

“\*” This data value failed one of NCDC's quality control tests.

“\*\*” values in the Precipitation category above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
National Oceanic & Atmospheric Administration

National Environmental Satellite, Data, and Information Service  
Elev: 25 ft. Lat: 47.24° N Lon: 122.412° W  
Station: TACOMA NUMBER 1, WA US GHCND-USC00458278

**Record of Climatological Observations**

These data are quality controlled and may not be

Identical to the original observations.

Generated on 02/08/2017

National Centers for Environmental Information  
151 Patton Avenue  
Asheville, North Carolina 28801

P r e i m i n a r y	M o n t h	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)		
			24 hrs. ending at observation time	At O b s e	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move mt nl (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2012	9	1	70	51	69	0.00					
2012	9	2	72	51	66	0.00					
2012	9	3	70	49	70	0.00					
2012	9	4	73	51	72	0.00					
2012	9	5	75	51	74	0.00					
2012	9	6	76	54	75	0.00					
2012	9	7	81	53	80	0.00					
2012	9	8	82	55	76	0.00					
2012	9	9	76	58	66	0.00					
2012	9	10	68	54	68	0.01					
2012	9	11	68	51	64	0.00					
2012	9	12	67	47	67	0.00					
2012	9	13	75	47	75	0.00					
2012	9	14	76	50	74	0.00					
2012	9	15	76	50	69	0.00					
2012	9	16	70	49	70	0.00					
2012	9	17	75	50	75	0.00					
2012	9	18	77	51	75	0.00					
2012	9	19	76	54	68	0.00					
2012	9	20	69	54	68	0.00					
2012	9	21	69	57	62	0.00					
2012	9	22	65	57	65	0.00					
2012	9	23	66	50	66	0.00					
2012	9	24	67	48	66	0.00					
2012	9	25	66	56	63	0.00					
2012	9	26	65	49	64	0.00					
2012	9	27	69	48	68	0.00					
2012	9	28	73	48	72	0.00					
2012	9	29	73	58	65	0.01					
2012	9	30	66	46	65	0.00					
		Summary	72	52		0.02					D

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation  
Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 0=Unknown

\*“\*” This data failed one of NCDC’s quality control tests.

\*“\*” values in the Precipitation category above indicate a TRACE value was recorded.

\*A “\*” value in the Precipitation Flag or the Snow Flag column indicates a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

Elev: 25 ft. Lat: 47° 24' N Lon: 122° 41' W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

P r e c i p i t a t i o n  M o n t h  Y e a r	D a y	Temperature (F)				Precipitation				Evaporation				Soil Temperature (F)			
		24 hrs. ending at observation time		at observation time		24 Hour Amounts ending at observation time		At Obs Time		24 Hour Wind Movement (mi)		Amount of Evap. (in)		Ground Cover (see *)		8 in depth	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
2012	10	1	71	47	70	0.00											
2012	10	2	71	53	59	0.00											
2012	10	3	62	43	61	0.00											
2012	10	4	61	44	60	0.00											
2012	10	5	67	39	66	0.00											
2012	10	6	70	40	69	0.00											
2012	10	7	70	41	68	0.00											
2012	10	8	69	44	68	0.00											
2012	10	9	69	47	58	0.00											
2012	10	10	60	47	53	T											
2012	10	11	56	49	56	0.00											
2012	10	12	57	47	57	0.02											
2012	10	13	63	54	61	0.13											
2012	10	14	66	57	60	0.31											
2012	10	15	61	54	59	0.38											
2012	10	16	64	52	57	0.39											
2012	10	17	58	44	56	0.00											
2012	10	18	63	42	61	0.00											
2012	10	19	63	42	56	0.54											
2012	10	20	56	43	46	0.11											
2012	10	21	53	40	49	0.20											
2012	10	22	49	37	44	0.21											
2012	10	23	53	42	52	0.08											
2012	10	24	54	44	53	0.12											
2012	10	25	54	45	51	0.13											
2012	10	26	52	44	48	0.13											
2012	10	27	53	48	50	0.31											
2012	10	28	59	50	57	0.74											
2012	10	29	64	50	58	0.63											
2012	10	30	59	53	56	0.66											
2012	10	31	60	55	58	0.88											
	Summary	61	46			5.97	0										

The " " flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=allowow; 3=Bare Ground; 4=Stone Grass; 5=Sand; 6=Straw mulch; 7=Grass mulch; 8=Barley much; 9=Unknown

"s" This data value failed one of NCEP's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n  M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)				
		24 hrs. ending at observation time	at observation time	24 Hour Amounts ending at observation time	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.	Min.
2012	11	1	59	51	57	0.51									
2012	11	2	59	51	56	0.01									
2012	11	3	62	51	61	0.24									
2012	11	4	67	55	67	0.06									
2012	11	5	67	53	55	0.17									
2012	11	6	57	46	57	0.02									
2012	11	7	57	46	53	0.01									
2012	11	8	53	33	49	0.00									
2012	11	9	52	33	45	T									
2012	11	10	45	30	44	T									
2012	11	11	46	32	44	0.20									
2012	11	12	55	43	53	0.61									
2012	11	13	53	47	50	0.21									
2012	11	14	53	48	50	0.06									
2012	11	15	53	38	46	0.01									
2012	11	16	46	37	44	0.09									
2012	11	17	57	44	45	0.46									
2012	11	18	53	43	51	0.17									
2012	11	19	56	47	53	2.00									
2012	11	20	58	43	52	0.35									
2012	11	21	52	44	45	0.25									
2012	11	22	47	42	47	1.18									
2012	11	23	50	41	46	0.03									
2012	11	24	50	41	45	0.03									
2012	11	25	45	36	44	0.02									
2012	11	26	49	33	43	T									
2012	11	27	46	34	45	0.00									
2012	11	28	45	37	44	0.09									
2012	11	29	56	37	54	0.07									
2012	11	30	61	45	52	0.27									
		Summary	54	42		0									

The ... flags in Preliminary indicate the data have not completed quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brone grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation Flag or the Snow Flag column indicate a trace value was recorded.

"A" values in the Precipitation Flag above indicate a trace value was recorded.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
 These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/06/2017

P r e c i p i t a t i o n  M o n t h y  Y e a r a r y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)					
		24 hrs. ending at observation time		at O s e s	24 Hour Amounts ending at observation time		F i v a s e	Snow, ice pellets, hail (in)	F i v a s e	Snow, ice pellets, hail (in)	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	At Obs Time	4 in depth	8 in depth
		Max.	Min.		Rain, melted snow, etc. (in)	g	g	g	ft on ground (in)	ft (mi)	Max.	Min.	Max.	Min.		
2012	12	1	56	47	54	1.21										
2012	12	2	54	44	46	0.27										
2012	12	3	50	44	48	0.75										
2012	12	4	53	46	50	0.47										
2012	12	5	50	41	46	0.24										
2012	12	6	46	42	45	0.21										
2012	12	7	46	42	44	0.16										
2012	12	8	44	39	43	0.01										
2012	12	9	43	39	41	0.01										
2012	12	10	45	41	44	0.21										
2012	12	11	48	42	44	0.21										
2012	12	12	46	41	44	0.02										
2012	12	13	47	39	45	0.01										
2012	12	14	46	40	42	0.42										
2012	12	15	43	33	41	0.13										
2012	12	16	42	37	40	0.47										
2012	12	17	48	38	39	0.75										
2012	12	18	40	34	37	0.16										
2012	12	19	49	35	43	0.23										
2012	12	20	49	35	42	1.09										
2012	12	21	43	29	42	0.00										
2012	12	22	49	37	43	0.08										
2012	12	23	44	39	42	0.06										
2012	12	24	44	38	43	0.21										
2012	12	25	43	36	41	0.56										
2012	12	26	46	39	44	0.25										
2012	12	27	47	42	45	0.07										
2012	12	28	46	38	44	T										
2012	12	29	44	38	41	0.04										
2012	12	30	42	36	41	0.02										
2012	12	31	42	31	40	0.01										
Summary		46	39			8.33										

The " " flag in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Grass; 5=Soil; 6=Straw mulch; 7=Grass mulch; 8=Bare mud; 9=Unknown

"T" This data value failed one of NCDC's quality control tests.

"F" values in the Precipitation category above indicate a TRACE value was recorded.

"G" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

### Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e s u r e  M o n t h y  Y e a r	D a y	Temperature (F)		Precipitation			Evaporation			Soil Temperature (F)		
		24 hrs. ending at observation time		at observation time			24 Hour Amounts ending at observation time			8 in depth		
		Max.	Min.	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F Snow, ice pellets, hail, ice on ground (in)	24 Hour Wind Move- nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	
2013	1	1	41	27	40	0.02						
2013	1	2	41	28	41	0.00						
2013	1	3	42	26	39	0.01						
2013	1	4	51	36	47	0.32						
2013	1	5	48	40	45	0.02						
2013	1	6	48	38	47	0.03						
2013	1	7	50	41	48	0.35						
2013	1	8	53	42	52	0.22						
2013	1	9	54	38	41	1.05						
2013	1	10	55	35	39	0.03						
2013	1	11	39	29	37	0.06						
2013	1	12	37	26	36	T						
2013	1	13	36	25	35	0.00						
2013	1	14	38	25	38	0.01						
2013	1	15	42	32	41	0.00						
2013	1	16	42	28	40	0.00						
2013	1	17	40	28	36	0.01						
2013	1	18	38	29	38	0.00						
2013	1	19	39	32	36	0.00						
2013	1	20	37	32	36	0.00						
2013	1	21	37	33	35	T						
2013	1	22	38	28	37	T						
2013	1	23	42	35	41	0.16						
2013	1	24	46	36	43	0.06						
2013	1	25	52	41	51	0.28						
2013	1	26	51	36	46	0.07						
2013	1	27	46	41	41	0.12						
2013	1	28	43	39	43	0.10						
2013	1	29	49	42	48	0.17						
2013	1	30	49	45	49	0.13						
2013	1	31	52	45	51	0.10						
	Summary	44	34			3.32	0					

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren Ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 0=Unknown

\*S: This data value failed one of NCDC's quality control tests.

\*T: Values in the Precipitation category above indicate a TRACE value was recorded.

\*A: Values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

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National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Generated on 02/08/2017

P r e - i - m - n a r y	M o n t h a t h	D a t y	Temperature (F)		Precipitation			Evaporation		8 in depth			
			24 hrs. ending at observation time		24 Hour Amounts ending at observation time		At Obs Time			24 Hour Wind Movement (mi)		Ground Cover (see *)	
			s	e	v	a	f	i	g	Max.	Min.	Max.	Min.
2013	2	1	51	43	48	0.04							
2013	2	2	48	39	43	0.01							
2013	2	3	48	36	48	T							
2013	2	4	51	44	49	0.01							
2013	2	5	52	41	47	0.12							
2013	2	6	51	43	48	0.09							
2013	2	7	50	41	46	0.08							
2013	2	8	48	33	44	T							
2013	2	9	46	40	46	0.00							
2013	2	10	46	39	44	0.00							
2013	2	11	48	40	47	0.01							
2013	2	12	53	45	52	0.01							
2013	2	13	52	45	49	0.01							
2013	2	14	49	42	46	0.01							
2013	2	15	52	42	51	0.00							
2013	2	16	51	38	49	0.00							
2013	2	17	49	39	48	0.00							
2013	2	18	48	39	46	0.00							
2013	2	19	48	40	47	0.00							
2013	2	20	47	34	44	0.00							
2013	2	21	45	40	44	0.09							
2013	2	22	46	42	45	0.43							
2013	2	23	50	40	49	0.00							
2013	2	24	50	41	49	0.00							
2013	2	25	50	41	47	0.05							
2013	2	26	51	37	48	0.01							
2013	2	27	49	42	47	0.10							
2013	2	28	54	43	53	0.51							
Summary			49	40		1.58							0

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

“\*” This data value failed one of NCDC's quality control tests.

“T” values in the Precipitation category above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elevation: 25 ft. Lat: 47.24° N Lon: 122.412° W

**Record of Climatological Observations**  
 These data are quality controlled and may not be  
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 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Station: TACOMA NUMBER 1, WA US GHND:USC00458278

P r e s u r e  M o n t h  Y e a r	D a y	Temperature (F)		Precipitation		Evaporation		8 in depth		Soil Temperature (F)		
		24 hrs. ending at observation time	at O b s e s t a t e m e n t i n t e r i n g	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move mt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.
2013	3	1	60	52	58	0.03						
2013	3	2	58	48	48	0.03						
2013	3	3	51	35	49	0.00						
2013	3	4	51	30	50	0.00						
2013	3	5	50	37	46	0.00						
2013	3	6	47	42	43	0.16						
2013	3	7	53	41	51	0.65						
2013	3	8	52	38	51	T						
2013	3	9	55	35	53	0.00						
2013	3	10	54	37	46	0.02						
2013	3	11	50	43	50	0.00						
2013	3	12	58	47	56	0.00						
2013	3	13	56	50	54	0.35						
2013	3	14	54	50	53	0.00						
2013	3	15	60	49	59	0.11						
2013	3	16	60	46	46	0.11						
2013	3	17	47	39	42	0.02						
2013	3	18	53	40	53	0.01						
2013	3	19	53	35	48	0.00						
2013	3	20	52	43	47	0.91						
2013	3	21	47	37	47	0.00						
2013	3	22	47	34	46	0.00						
2013	3	23	48	35	48	0.00						
2013	3	24	50	32	50	0.00						
2013	3	25	57	34	56	0.00						
2013	3	26	59	47	57	0.00						
2013	3	27	60	48	52	0.01						
2013	3	28	57	44	55	0.07						
2013	3	29	60	46	49	0.02						
2013	3	30	62	46	61	0.00						
2013	3	31	65	42	65	0.00						
Summary		54	41			2.50		0				

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Dare ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 0=Unknown

\*S: This data value failed one of NCDC's quality control tests.

\*T: Values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev. 25 ft Lat: 47°24' N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00456278

### Record of Climatological Observations

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 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p i t a t i o n	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)				
			24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	4 in depth		.8 in depth		Ground Cover (see *)			
			Max.	Min.				Rain, melted snow, etc. (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	Snow, ice pellets, hail, ice on ground (in)	Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max..	Min.
2013	4	1	66	50	63	0.00										
2013	4	2	65	49	56	0.00										
2013	4	3	59	46	59	0.00										
2013	4	4	59	49	52	0.11										
2013	4	5	58	51	56	0.79										
2013	4	6	56	46	51	0.66										
2013	4	7	51	40	48	1.17										
2013	4	8	55	42	55	0.31										
2013	4	9	57	42	56	0.00										
2013	4	10	57	52	56	0.28										
2013	4	11	56	45	52	0.00										
2013	4	12	53	41	44	0.11										
2013	4	13	48	39	47	0.32										
2013	4	14	52	42	51	0.01										
2013	4	15	55	39	54	0.00										
2013	4	16	55	39	54	0.00										
2013	4	17	61	39	61	0.00										
2013	4	18	61	44	53	0.00										
2013	4	19	54	49	54	0.54										
2013	4	20	59	48	59	0.00										
2013	4	21	59	45	49	0.00										
2013	4	22	57	40	57	0.00										
2013	4	23	59	38	59	0.00										
2013	4	24	65	41	65	0.00										
2013	4	25	70	44	68	0.00										
2013	4	26	71	48	68	0.00										
2013	4	27	73	53	56	0.00										
2013	4	28	60	50	59	0.09										
2013	4	29	60	46	55	0.13										
2013	4	30	56	39	53	0.00										
		Summary	59	45	45	4.52									0	

The \*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Unknown

\*a = This data value failed one of NCDC's quality control tests.

\*T = Values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

"A" values in the Precipitation Flag or the Snow Flag column indicate a TRACE value was recorded.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
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 Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h y	D a y	Temperature (F)		Precipitation			Evaporation		Soil Temperature (F)		
		24 hrs. ending at observation time	al O b	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move- nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.
Y e m i n a r y				Rain, melted snow, etc. (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)					
		2013	5	1	61	39	61	0.00			
		2013	5	2	65	46	64	0.00			
		2013	5	3	66	49	66	0.00			
		2013	5	4	74	51	73	0.00			
		2013	5	5	78	58	78	0.00			
		2013	5	6	82	51	82	0.00			
		2013	5	7	83	52	69	0.00			
		2013	5	8	70	53	61	0.00			
		2013	5	9	67	49	65	0.00			
		2013	5	10	76	50	76	0.00			
		2013	5	11	79	54	79	0.00			
		2013	5	12	82	60	65	0.02			
		2013	5	13	68	56	59	0.22			
		2013	5	14	64	47	63	0.05			
		2013	5	15	65	47	56	0.00			
		2013	5	16	68	50	67	0.05			
		2013	5	17	69	53	62	0.06			
		2013	5	18	69	52	59	0.04			
		2013	5	19	60	52	60	0.01			
		2013	5	20	64	49	64	0.00			
		2013	5	21	67	46	57	0.48			
		2013	5	22	59	44	52	0.46			
		2013	5	23	54	44	50	0.31			
		2013	5	24	61	44	61	0.02			
		2013	5	25	61	50	59	0.12			
		2013	5	26	62	51	59	0.03			
		2013	5	27	62	50	58	0.34			
		2013	5	28	63	53	59	0.19			
		2013	5	29	59	49	59	0.36			
		2013	5	30	62	49	58	0.09			
		2013	5	31	63	48	62	0.01			
				Summary	67	50		2.86			0

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barley ground; 4=Brrome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mulch; 0=Unknown

“S” This data is one of NCDC’s quality control tests.

“T” values in the Precipitation category above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft Lat: 47°24' N Lon: 122°41' W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00450278

### Record of Climatological Observations

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 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e i c i m i n a r y	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)				
			24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	4 in depth		8 in depth		Ground Cover (see *)			
			Max.	Min.		Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i g	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i g	Amount of Evap. (in)	Wind Move- nt (mi)	Ground Cover (see *)	Max.	Min.
2013	6	1	72	52	72	0.00										
2013	6	2	74	54	67	0.01										
2013	6	3	70	52	67	0.00										
2013	6	4	75	52	75	0.00										
2013	6	5	77	55	74	0.00										
2013	6	6	77	55	75	0.00										
2013	6	7	77	57	71	0.00										
2013	6	8	71	54	64	0.00										
2013	6	9	71	54	66	0.00										
2013	6	10	68	52	67	0.00										
2013	6	11	71	51	57	0.04										
2013	6	12	65	53	63	0.01										
2013	6	13	66	52	65	0.24										
2013	6	14	67	54	61	0.02										
2013	6	15	72	52	71	0.00										
2013	6	16	74	54	72	0.00										
2013	6	17	76	59	74	0.00										
2013	6	18	76	57	72	0.00										
2013	6	19	72	53	68	0.00										
2013	6	20	72	53	62	0.00										
2013	6	21	68	54	67	0.10										
2013	6	22	74	53	74	0.00										
2013	6	23	76	58	65	0.02										
2013	6	24	69	57	66	0.76										
2013	6	25	72	57	70	0.22										
2013	6	26	73	57	67	0.18										
2013	6	27	70	57	64	0.23										
2013	6	28	82	60	81	0.02										
2013	6	29	86	63	82	0.00										
2013	6	30	87	60	87	0.00										
		Summary	73	55	55	1.85										

The "P" flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brass grass; 5=Sod; 6=Straw mulch; 7=Bare muck; 8=Unknown

"S" This data value failed one of NCDC's quality control tests.

"F" values in the Precipitation Flag or the Snow Flag column indicate a multiply total, accumulated since last measurement, is being used.

"A" values in the Precipitation Flag or the Snow Flag column indicate a TRACE value was recorded.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
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 Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h a y  Y e a r r y	Temperature (F)	Precipitation		Evaporation		8 in depth					
		24 hrs. ending at observation time	at observation time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.
2013	7	1	89	63	85	0.00					
2013	7	2	87	60	75	0.00					
2013	7	3	78	61	76	0.00					
2013	7	4	77	58	69	0.00					
2013	7	5	72	56	72	0.00					
2013	7	6	74	55	74	0.00					
2013	7	7	76	56	72	0.00					
2013	7	8	77	56	71	0.00					
2013	7	9	81	58	80	0.00					
2013	7	10	81	58	68	0.00					
2013	7	11	81	54	67	0.00					
2013	7	12	81	54	62	0.00					
2013	7	13	73	51	73	0.00					
2013	7	14	78	54	78	0.00					
2013	7	15	80	57	75	0.00					
2013	7	16	80	60	80	0.00					
2013	7	17	81	61	69	0.01					
2013	7	18	73	57	72	0.00					
2013	7	19	76	57	76	0.00					
2013	7	20	77	55	70	0.00					
2013	7	21	75	55	71	0.00					
2013	7	22	75	55	71	0.00					
2013	7	23	80	56	79	0.00					
2013	7	24	81	59	80	0.00					
2013	7	25	81	57	78	0.00					
2013	7	26	82	57	80	0.00					
2013	7	27	81	55	73	0.00					
2013	7	28	76	54	69	0.00					
2013	7	29	71	57	71	0.00					
2013	7	30	76	56	72	0.00					
2013	7	31	76	57	67	0.00					
Summary		78	57			0.01	0				

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\*S This data value failed one of NCDC's quality control tests.

\*T Values in the Precipitation category above indicate a TRACE value was recorded.

\*A Values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

## Record of Climatological Observations

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 Generated on 02/08/2017

P r e - i m i n a r y	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)			
			24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	24 Hour Wind Movement (mi)		Amount of Evap. (in)	Ground Cover (see *)		Max.	
			Max.	Min.		F e r v a r y	Snow, ice pellets, hail (in)	F e r v a r y	Snow, ice pellets, hail, ice on ground (in)	Max.	Min.			Min.	
2013	8	1	69	55	68	0.00									
2013	8	2	69	58	60	0.02									
2013	8	3	72	58	72	0.01									
2013	8	4	76	57	76	0.00									
2013	8	5	83	59	82	0.00									
2013	8	6	83	57	82	0.00									
2013	8	7	84	58	81	0.00									
2013	8	8	84	60	78	0.00									
2013	8	9	80	59	78	0.00									
2013	8	10	82	60	75	0.09									
2013	8	11	77	59	76	0.00									
2013	8	12	76	61	76	0.00									
2013	8	13	76	60	76	0.00									
2013	8	14	80	58	78	0.00									
2013	8	15	78	62	67	0.15									
2013	8	16	82	60	82	0.00									
2013	8	17	84	64	77	0.00									
2013	8	18	78	60	77	0.00									
2013	8	19	79	60	79	0.00									
2013	8	20	79	60	75	0.00									
2013	8	21	77	54	76	0.00									
2013	8	22	78	58	78	0.00									
2013	8	23	79	63	74	0.00									
2013	8	24	79	61	74	0.00									
2013	8	25	75	56	68	0.00									
2013	8	26	76	61	74	0.01									
2013	8	27	77	60	77	0.03									
2013	8	28	77	60	76	0.26									
2013	8	29	77	64	72	0.25									
2013	8	30	75	61	75	0.23									
2013	8	31	76	55	76	0.00									
		Summary	78	59	-	1.05									0

The \*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 9=Unknown

"x" This data value failed one of NCEC's quality control tests.

"\*\*" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
These data are quality controlled and may not be  
identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n  M o n t h a y  Y e a r r y	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
		24 hrs. ending at observation time	at O b s e r v a t i o n t i m e	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move me nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2013	9	1	80	58	80	0.00			
2013	9	2	82	59	78	0.00			
2013	9	3	79	60	72	0.24			
2013	9	4	74	59	68	—			
2013	9	5	71	59	66	0.20			
2013	9	6	69	60	68	1.43			
2013	9	7	71	60	71	0.02			
2013	9	8	76	56	76	0.00			
2013	9	9	77	57	74	0.00			
2013	9	10	74	57	73	0.00			
2013	9	11	83	57	81	0.00			
2013	9	12	82	60	74	0.00			
2013	9	13	77	60	65	0.00			
2013	9	14	66	60	66	0.00			
2013	9	15	68	58	67	0.01			
2013	9	16	70	57	69	0.04			
2013	9	17	70	57	63	0.02			
2013	9	18	69	55	66	0.00			
2013	9	19	72	48	70	0.00			
2013	9	20	74	49	72	0.00			
2013	9	21	72	55	68	0.21			
2013	9	22	70	54	60	0.53			
2013	9	23	68	54	60	0.72			
2013	9	24	62	48	54	0.07			
2013	9	25	58	50	58	0.20			
2013	9	26	60	44	58	0.00			
2013	9	27	61	44	57	0.02			
2013	9	28	60	53	60	1.87			
2013	9	29	60	51	53	1.24			
2013	9	30	58	49	55	1.47			
Summary		70	55			0			
						8.29			

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Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren Ground; 4=Brrome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Bare muck; 0=Unknown

\*“” This data value failed one of NCDC’s quality control tests.

— values in the Precipitation category above indicate a TRACE value was recorded.

“” A values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev. 25 ft. Lat: 47°24' N Lon: 122°41' W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p t i o n	T e m p e r a t u r e	M o n t h	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)			
				24 hrs. ending at observation time	at 0 b	at s	24 Hour Amounts ending at observation time	at e	at v	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F a g	24 Hour Wind Movement nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	4 in depth
2013	10	1	58	47	57	0.59										
2013	10	2	58	49	55	0.20										
2013	10	3	55	48	54	0.25										
2013	10	4	59	40	59	0.00										
2013	10	5	63	42	62	0.02										
2013	10	6	75	43	75	0.00										
2013	10	7	75	53	59	0.20										
2013	10	8	60	50	55	0.02										
2013	10	9	55	40	55	0.00										
2013	10	10	56	45	52	0.05										
2013	10	11	56	48	56	0.05										
2013	10	12	56	48	54	0.05										
2013	10	13	56	41	55	0.00										
2013	10	14	55	39	55	0.00										
2013	10	15	56	41	56	0.02										
2013	10	16	57	43	53	T										
2013	10	17	55	44	55	0.00										
2013	10	18	56	43	49	T										
2013	10	19	51	44	48	T										
2013	10	20	50	46	50	0.00										
2013	10	21	51	45	50	0.00										
2013	10	22	51	47	51	0.00										
2013	10	23	51	46	51	0.00										
2013	10	24	52	43	48	0.00										
2013	10	25	52	47	52	0.02										
2013	10	26	53	45	52	T										
2013	10	27	55	45	55	0.07										
2013	10	28	55	46	54	T										
2013	10	29	55	36	54	0.00										
2013	10	30	57	36	57	0.00										
2013	10	31	57	42	54	0.03										
		Summary	56	44	1.57	0										

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\* This data value failed one of NCDC's quality control tests.

"T" - Values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47.247° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

**Record of Climatological Observations**  
 These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p i t a t i o n  M o n t h y	D a y	Temperature (F)		Precipitation			Evaporation			Observation Time Temperature: 1600 Observation Time Precipitation: 1600		
		24 hrs. ending at observation time		24 Hour Amounts ending at observation time			At Obs Time			8 in depth		
		Max.	Min.	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Min.	Max.	Ground Cover (see *)
2013	11	1	59	48	57	T						
2013	11	2	57	50	52	T						
2013	11	3	52	41	52	T						
2013	11	4	52	37	47	0.01						
2013	11	5	55	44	54	0.06						
2013	11	6	54	43	51	T						
2013	11	7	52	47	49	1.07						
2013	11	8	55	48	53	0.00						
2013	11	9	53	37	47	0.00						
2013	11	10	50	45	48	0.20						
2013	11	11	54	41	51	0.00						
2013	11	12	59	44	58	0.24						
2013	11	13	58	50	56	0.00						
2013	11	14	57	46	49	0.00						
2013	11	15	49	44	46	0.10						
2013	11	16	49	40	47	0.17						
2013	11	17	51	42	49	0.23						
2013	11	18	52	47	51	0.77						
2013	11	19	54	44	44	0.21						
2013	11	20	44	35	41	T						
2013	11	21	42	27	41	0.00						
2013	11	22	43	26	43	0.00						
2013	11	23	45	28	44	0.00						
2013	11	24	45	28	44	T						
2013	11	25	48	31	45	T						
2013	11	26	46	31	46	T						
2013	11	27	51	38	48	T						
2013	11	28	51	34	46	T						
2013	11	29	50	35	47	0.00						
2013	11	30	52	44	52	0.02						
		Summary	51	40		3.58	0					

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\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare mud; 9=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation Flag or the Snow Flag column indicate a TRACE value was recorded.

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### Record of Climatological Observations

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Station: TACOMA NUMBER 1, WA US GHCND-USC00458278

Generated on 02/08/2017

P r e c i p i t a t i o n  M e a r t h  Y e a r y	M o n t h  D a y	Temperature (F)		Precipitation		Evaporation		Observation Time Temperature 1600 Observation Time Precipitation: 1600		
		24 hrs. ending at observation time	at O b s e r v a t o n	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i a g	F i a g	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)
2013	12	1	54	49	51	0.42				
2013	12	2	52	38	43	0.00				
2013	12	3	43	35	37	0.10				
2013	12	4	37	26	36	T				
2013	12	5	36	24	32	T				
2013	12	6	32	27	28	0.00				
2013	12	7	28	21	28	0.00				
2013	12	8	30	16	30	0.00				
2013	12	9	32	20	32	0.00				
2013	12	10	38	30	38	0.00				
2013	12	11	39	27	37	0.00				
2013	12	12	50	37	50	0.08				
2013	12	13	50	37	50	0.08				
2013	12	14	50	40	48	T				
2013	12	15	54	44	51	0.50				
2013	12	16	51	44	45	T				
2013	12	17	46	40	45	0.00				
2013	12	18	48	39	40	0.08				
2013	12	19	40	30	39	0.00				
2013	12	20	44	31	44	0.09				
2013	12	21	46	41	46	0.15				
2013	12	22	50	44	50	0.09				
2013	12	23	52	48	48	0.07				
2013	12	24	49	41	43	0.00				
2013	12	25	43	33	40	0.00				
2013	12	26	40	33	37	0.00				
2013	12	27	46	31	46	0.03				
2013	12	28	47	41	44	0.00				
2013	12	29	45	38	43	0.02				
2013	12	30	44	38	43	0.00				
2013	12	31	47	38	47	0.02				
Summary		44	35			1.73	0			

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\*Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren Ground; 4=Brome Grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mud; 0=Unknown

\*T\* This data value failed one of NCDC's quality control tests.

\*T\* values in the Precipitation category above indicate a TRACE value was recorded.

\*A\* values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

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Generated on 02/08/2017

P r e i m i n a r y	M o n t h	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
			24 hrs. ending at observation time	at O b	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2014	1	1	47	38	42	T				
2014	1	2	52	42	48	0.02				
2014	1	3	50	39	43	0.16				
2014	1	4	43	31	42	T				
2014	1	5	42	27	40	T				
2014	1	6	41	28	39	T				
2014	1	7	46	37	45	0.46				
2014	1	8	49	42	49	0.25				
2014	1	9	49	42	44	0.29				
2014	1	10	49	43	47	0.35				
2014	1	11	58	42	44	1.29				
2014	1	12	50	41	50	0.32				
2014	1	13	52	48	52	0.01				
2014	1	14	52	48	49	0.00				
2014	1	15	49	39	46	0.00				
2014	1	16	48	39	41	0.00				
2014	1	17	48	37	40	0.00				
2014	1	18	47	32	44	0.00				
2014	1	19	44	37	42	0.00				
2014	1	20	44	36	44	0.00				
2014	1	21	46	34	44	0.00				
2014	1	22	47	42	45	0.00				
2014	1	23	45	40	44	0.00				
2014	1	24	45	33	44	0.00				
2014	1	25	47	29	47	0.00				
2014	1	26	48	29	42	0.00				
2014	1	27	48	29	41	0.00				
2014	1	28	47	39	46	0.01				
2014	1	29	51	43	44	0.88				
2014	1	30	48	42	44	0.21				
2014	1	31	45	40	43	0.04				
	Summary	48	38			4.29	0			

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\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren Ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Barren mulch; 0=Unknown

"T" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

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U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft Lat: 47.247° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

### Record of Climatological Observations

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Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e i m i n a r y	M o n t h	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
			24 hrs. ending at observation time	at Obs	24 Hour Amounts ending 9 at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2014	2	1	44	39	44	0.01				
2014	2	2	45	31	44	0.01				
2014	2	3	45	35	36	0.00				
2014	2	4	36	24	33	0.00				
2014	2	5	33	24	28	0.00				
2014	2	6	29	20	20	0.00				
2014	2	7	35	20	34	0.00				
2014	2	8	39	30	34	0.00				
2014	2	9	38	28	37	0.32				
2014	2	10	51	34	49	0.47				
2014	2	11	54	40	50	0.24				
2014	2	12	54	44	53	0.45				
2014	2	13	55	44	54	0.25				
2014	2	14	55	42	52	0.33				
2014	2	15	52	35	45	0.27				
2014	2	16	50	38	45	0.30				
2014	2	17	47	39	43	2.60				
2014	2	18	47	41	46	0.97				
2014	2	19	48	40	46	0.30				
2014	2	20	48	40	43	0.00				
2014	2	21	49	40	44	0.00				
2014	2	22	44	36	40	0.03				
2014	2	23	45	40	42	0.12				
2014	2	24	42	38	42	0.65				
2014	2	25	49	40	47	0.15				
2014	2	26	54	38	52	0.01				
2014	2	27	54	42	50	0.00				
2014	2	28	52	42	51	0.00				
		Summary	46	36	7.48	0				

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\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Unknown

“\*” This data value failed one of NCDC's quality control tests.

“T” values in the Precipitation Category above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

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U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47.24° N Lon: 122.412° W

**Record of Climatological Observations**  
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 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

P r e c i p i t a t i o n  M e a t h  Y e a r  M o n t h  D a y	Temperature (F)	Precipitation				Evaporation				Soil Temperature (F)			
		24 hrs. ending at observation time		at observation time		24 Hour Amounts ending at observation time		At Obs Time		4 in depth		8 in depth	
		Max.	Min.	Max.	Min.	Rain, melted snow, etc. (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2014	3	1	51	41	41	0.01							
2014	3	2	51	39	48	0.32							
2014	3	3	56	46	56	0.60							
2014	3	4	56	47	54	0.62							
2014	3	5	58	48	48	1.02							
2014	3	6	58	48	51	0.77							
2014	3	7	60	47	60	0.01							
2014	3	8	60	40	46	0.38							
2014	3	9	58	46	55	0.91							
2014	3	10	55	45	51	0.72							
2014	3	11	59	38	53	0.20							
2014	3	12	57	37	54	0.00							
2014	3	13	59	38	56	0.00							
2014	3	14	58	49	57	0.30							
2014	3	15	62	42	62	0.02							
2014	3	16	62	45	45	0.66							
2014	3	17	52	37	47	0.50							
2014	3	18	51	38	49	0.00							
2014	3	19	51	45	50	0.07							
2014	3	20	51	35	48	0.00							
2014	3	21	50	36	48	0.00							
2014	3	22	55	33	53	0.00							
2014	3	23	56	42	52	0.00							
2014	3	24	62	40	62	0.00							
2014	3	25	63	40	56	0.10							
2014	3	26	57	41	51	0.11							
2014	3	27	54	44	51	0.18							
2014	3	28	53	44	51	0.40							
2014	3	29	56	44	53	0.60							
2014	3	30	53	42	51	0.31							
2014	3	31	57	34	57	T							
		Summary	56	42		8.81							0

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\*Ground Cover: 1=Grass; 2=Fallow; 4=Barren ground; 5=Soil; 6=Straw mulch; 7=Grass mulch; 8=Bare mulch; 0=Unknown

"S" This date failed one of NCDC's quality control tests.

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**Record of Climatological Observations**  
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 Generated on 02/08/2017

P r e c i p i t a t i o n	M a r t h a y	D a t h	O n t h a y	Temperature (F)		Precipitation			Evaporation			Soil Temperature (F)		
				24 hrs. ending at observation time		24 Hour Amounts ending at observation time			At Obs Time			4 in depth		
				Max.	Min.	Rain, melted snow, etc. (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	Snow, ice pellets, hail, ice on ground (in)	24 Hour Wind Move- ment (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2014	4	1	58	43	57	0.00								
2014	4	2	59	43	59	0.00								
2014	4	3	60	42	51	0.01								
2014	4	4	55	41	55	0.10								
2014	4	5	56	41	52	0.22								
2014	4	6	57	46	57	0.15								
2014	4	7	67	49	66	0.00								
2014	4	8	70	50	55	0.09								
2014	4	9	57	44	56	0.10								
2014	4	10	58	42	56	0.00								
2014	4	11	58	41	58	0.00								
2014	4	12	60	47	56	0.00								
2014	4	13	66	41	65	0.00								
2014	4	14	68	41	68	0.00								
2014	4	15	69	47	59	0.00								
2014	4	16	59	48	53	0.12								
2014	4	17	53	50	52	0.41								
2014	4	18	58	42	55	0.20								
2014	4	19	60	42	53	0.27								
2014	4	20	57	41	57	0.30								
2014	4	21	60	46	60	0.00								
2014	4	22	61	41	48	0.74								
2014	4	23	61	41	52	0.46								
2014	4	24	58	48	52	0.60								
2014	4	25	55	43	55	0.01								
2014	4	26	60	43	60	0.00								
2014	4	27	60	42	48	0.32								
2014	4	28	59	42	57	0.12								
2014	4	29	69	47	69	0.00								
2014	4	30	75	50	74	0.00								
Summary				61	44	4.22								

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\*“S” This data value failed one of NCDC’s quality control tests.

“T” values in the Precipitation Flag or the Snow Flag column indicate a TRACI value was recorded.

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### Record of Climatological Observations

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identical to the original observations.

Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h y  Y e a r	D a y	M o n t h y  Y e a r	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)					
			24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	4 in depth		8 in depth		Ground Cover (see *)		Ground Cover (see *)		
			Max.	Min.		Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i g	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i g	24 Hour Wind Move mt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.
2014	5	1	80	51	78	0.00			0.00								
2014	5	2	89	56	67	0.00			0.00								
2014	5	3	67	50	57	0.02											
2014	5	4	59	48	58	0.96											
2014	5	5	60	48	58	0.61											
2014	5	6	63	49	63	T											
2014	5	7	64	47	62	0.00											
2014	5	8	68	47	53	0.32											
2014	5	9	56	47	53	0.40											
2014	5	10	60	45	59	0.26											
2014	5	11	64	49	62	0.00											
2014	5	12	73	49	73	0.00											
2014	5	13	76	52	76	0.00											
2014	5	14	78	53	78	0.00											
2014	5	15	78	56	75	0.00											
2014	5	16	79	52	69	0.00											
2014	5	17	70	55	68	0.00											
2014	5	18	69	52	55	0.16											
2014	5	19	67	51	67	0.07											
2014	5	20	70	49	70	0.00											
2014	5	21	71	52	64	0.00											
2014	5	22	73	54	71	0.00											
2014	5	23	73	56	69	0.13											
2014	5	24	70	54	66	0.00											
2014	5	25	70	52	57	0.02											
2014	5	26	70	52	62	0.28											
2014	5	27	66	51	64	0.00											
2014	5	28	67	51	65	0.00											
2014	5	29	66	52	64	0.00											
2014	5	30	66	50	66	0.00											
2014	5	31	66	50	66	0.00											
		Summary	69	51		0				3.23							

The " " flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Straw mulch; 5=Sod; 6=Grass mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"S" This data value failed one of NCDC's quality control tests.

"T" Values in the Precipitation category above indicate a TRACE value was recorded.

"A" Values in the Precipitation Flag or the Snow Flag column indicate a multiday total accumulated since last measurement is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47°24' N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00456278

## Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e - i m i n a r y	M o n t h a r y	D a y	Temperature (F)		Precipitation			Evaporation		Soil Temperature (F)		
			24 hrs. ending at observation time	at O b	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.
2014	6	1	75	52	66	0.00						
2014	6	2	73	52	73	0.00						
2014	6	3	76	52	64	0.00						
2014	6	4	75	50	66	0.00						
2014	6	5	70	51	70	0.00						
2014	6	6	74	50	73	0.00						
2014	6	7	75	54	71	0.00						
2014	6	8	74	55	70	0.00						
2014	6	9	75	55	68	0.01						
2014	6	10	69	52	66	0.00						
2014	6	11	72	53	72	0.00						
2014	6	12	73	55	70	0.00						
2014	6	13	70	52	62	0.24						
2014	6	14	65	54	63	0.00						
2014	6	15	63	54	62	0.08						
2014	6	16	65	50	64	0.00						
2014	6	17	66	52	63	0.20						
2014	6	18	67	53	67	0.00						
2014	6	19	77	55	70	0.00						
2014	6	20	78	52	64	0.01						
2014	6	21	69	49	69	0.00						
2014	6	22	74	49	74	0.00						
2014	6	23	77	54	74	0.00						
2014	6	24	74	58	71	0.00						
2014	6	25	77	58	75	0.00						
2014	6	26	76	59	66	0.00						
2014	6	27	76	55	67	0.07						
2014	6	28	67	57	66	0.33						
2014	6	29	68	56	66	0.00						
2014	6	30	73	51	73	0.00						
		Summary	72	53	0	0.94						

The \*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brone grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 0=Unknown

"S" This data value failed one of NCDC's quality control tests.

"I" values in the Precipitation Flag or the Snow Flag column indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
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 identical to the original observations.  
 Generated on 02/08/2017

P r e c i p t a t i o n  M o n t h y	D a y	Temperature (F)		Precipitation		Evaporation		8 in depth		Soil Temperature (F)	
		24 hrs. ending at observation time	at O b s e s	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move mt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Ground Cover (see *)	Max.
2014	7	1	85	57	85	0.00					
2014	7	2	89	64	80	0.00					
2014	7	3	81	59	68	0.00					
2014	7	4	73	54	72	0.00					
2014	7	5	74	57	71	0.00					
2014	7	6	83	57	83	0.00					
2014	7	7	84	63	76	0.00					
2014	7	8	82	60	81	0.00					
2014	7	9	82	59	76	0.00					
2014	7	10	80	56	79	0.00					
2014	7	11	83	58	83	0.00					
2014	7	12	86	62	84	0.00					
2014	7	13	85	60	80	0.00					
2014	7	14	80	61	76	0.00					
2014	7	15	82	58	82	0.00					
2014	7	16	85	59	85	0.00					
2014	7	17	86	57	78	0.00					
2014	7	18	79	55	74	0.00					
2014	7	19	79	60	78	0.00					
2014	7	20	78	60	67	0.00					
2014	7	21	72	56	72	0.00					
2014	7	22	75	58	64	0.00					
2014	7	23	75	59	60	0.31					
2014	7	24	70	57	68	0.02					
2014	7	25	71	52	71	0.00					
2014	7	26	76	55	75	0.00					
2014	7	27	77	57	77	0.00					
2014	7	28	83	58	83	0.00					
2014	7	29	84	58	76	0.00					
2014	7	30	84	57	74	0.00					
2014	7	31	83	57	77	0.00					
		Summary	80	58		0.33		0			

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation.

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 2=Fallow; 3=Bare ground; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

\*s: This data value failed one of NCDC's quality control tests.

“T” values in the Precipitation category above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.  
 Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev. 25 ft. Lat: 47.247° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

### Record of Climatological Observations

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Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p i t a t i o n  M o n t h y  Y e a r a r y	Temperature (F)	Precipitation			Evaporation			Soil Temperature (F)		
		24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	24 Hour Wind Movement (mi)		Ground Cover (see *)
		D a y	Max.	Min.	Rain, melted snow, etc. (in)	F i a g	Snow, ice pellets, hail, etc. (in)	Snow, ice pellets, hail, ice on ground (in)	Amount of Evap. (in)	
2014	8	1	80	60	76	0.00				
2014	8	2	83	60	77	0.00				
2014	8	3	85	60	79	0.00				
2014	8	4	88	60	78	0.00				
2014	8	5	78	57	73	0.00				
2014	8	6	79	61	76	0.00				
2014	8	7	79	58	71	0.00				
2014	8	8	77	57	69	0.00				
2014	8	9	78	55	70	0.00				
2014	8	10	81	55	74	0.00				
2014	8	11	87	55	78	0.00				
2014	8	12	78	64	69	0.02				
2014	8	13	73	59	66	1.15				
2014	8	14	70	59	66	T				
2014	8	15	76	59	72	0.05				
2014	8	16	76	60	71	0.00				
2014	8	17	79	60	75	0.00				
2014	8	18	82	60	73	0.00				
2014	8	19	80	63	67	0.00				
2014	8	20	73	59	69	0.00				
2014	8	21	72	54	66	0.00				
2014	8	22	74	54	69	0.00				
2014	8	23	76	57	68	0.00				
2014	8	24	82	56	75	0.00				
2014	8	25	82	57	75	0.00				
2014	8	26	84	59	76	0.00				
2014	8	27	84	61	76	0.00				
2014	8	28	77	60	71	0.00				
2014	8	29	74	60	69	0.00				
2014	8	30	69	60	62	0.50				
2014	8	31	72	58	68	0.00				
Summary		78	59			172		0		

The "T" flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1-Bare Ground; 2-Fallow; 3-Fallow; 4-Brome grass; 5-Sod; 6-Straw mulch; 7-Grass mulch; 8-Bare muck; 9=Unknown

"T" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be

identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n  M o n t h y  Y e a r  M o n t h y  D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)		
	24 hrs. ending at observation time		at Obs Time	24 Hour Amounts ending at observation time		At Obs Time	4 in depth		8 in depth		Ground Cover (see *)	
	Max.	Min.		Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F a g				Max.	Min.	
2014	9	1	76	54	71	0.00						
2014	9	2	76	54	61	0.01						
2014	9	3	69	57	64	0.00						
2014	9	4	77	50	71	0.00						
2014	9	5	82	53	73	0.00						
2014	9	6	83	55	75	0.00						
2014	9	7	75	57	62	0.00						
2014	9	8	76	58	63	0.00						
2014	9	9	76	58	63	0.00						
2014	9	10	69	56	62	0.00						
2014	9	11	75	51	66	0.00						
2014	9	12	71	46	67	0.00						
2014	9	13	78	48	70	0.00						
2014	9	14	80	48	69	0.00						
2014	9	15	72	59	62	0.44						
2014	9	16	73	58	66	0.00						
2014	9	17	69	58	65	0.00						
2014	9	18	71	60	66	0.04						
2014	9	19	76	59	69	0.00						
2014	9	20	71	58	66	0.00						
2014	9	21	78	55	66	0.00						
2014	9	22	72	61	66	0.00						
2014	9	23	72	59	62	0.44						
2014	9	24	67	58	61	1.19						
2014	9	25	67	57	60	0.11						
2014	9	26	69	56	63	0.45						
2014	9	27	69	56	62	0.00						
2014	9	28	65	53	59	0.00						
2014	9	29	65	53	60	0.01						
2014	9	30	68	53	59	0.01						
		Summary	73	55	2.26	0						

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\*Ground Cover: 1=Grass; 2=allow; 3=Bare Ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 0=Unknown

\*T = This value failed one of NCDC's quality control tests.

\*T values in the Precipitation column indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev. 25 ft. Lat: 47°24' N Lon: 122°41' W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p i t a t i o n s	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)		
			24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	24 Hour Wind Movement (mi)		Amount of Evap. (in)	Ground Cover (see *)		Max.
			Max.	Min.	Rain, melted snow, etc. (in)	F	Snow, ice pellets, hail (in)	F	Snow, ice pellets, hail, ice on ground (in)	Ground Cover (see *)	Max.	Min.	Max.	Min.
2014	10	1	68	57	64	0.00								
2014	10	2	67	49	60	0.00								
2014	10	3	67	46	60	0.00								
2014	10	4	68	53	60	0.00								
2014	10	5	70	51	62	0.00								
2014	10	6	72	53	67	0.00								
2014	10	7	72	53	62	0.00								
2014	10	8	66	56	60	0.00								
2014	10	9	60	54	54	0.00								
2014	10	10	67	52	64	0.00								
2014	10	11	66	58	60	0.16								
2014	10	12	66	53	60	0.00								
2014	10	13	75	51	66	0.00								
2014	10	14	66	53	56	0.46								
2014	10	15	59	53	53	0.36								
2014	10	16	66	51	56	T								
2014	10	17	58	52	56	0.05								
2014	10	18	65	55	61	0.09								
2014	10	19	73	57	67	T								
2014	10	20	67	57	57	0.39								
2014	10	21	64	54	60	0.04								
2014	10	22	61	55	55	1.28								
2014	10	23	59	49	50	0.50								
2014	10	24	55	47	53	0.06								
2014	10	25	63	48	53	0.50								
2014	10	26	58	49	51	0.15								
2014	10	27	56	44	53	0.00								
2014	10	28	59	49	55	0.52								
2014	10	29	63	54	56	0.20								
2014	10	30	62	52	55	0.55								
2014	10	31	56	50	50	0.89								
Summary			64	52		6.20								

The \*\*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

\*T This data value failed one of NCDC's quality control tests.

\*T values in the Precipitation category above indicate a TRACE value was recorded.

\*X values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
 These data are quality controlled and may not be  
 identical to the original observations.  
 Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h y	Temperature (F)	Precipitation		Evaporation		Soil Temperature (F)	
		24 hrs. ending at observation time	at Obs Time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)
		Max.	Min.	Rain, melted snow, etc. (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail, ice on ground (in)	Ground Cover (see *)
2014	11	1	52	46	50	0.01	
2014	11	2	57	46	53	0.05	
2014	11	3	59	52	55	0.10	
2014	11	4	61	54	54	0.65	
2014	11	5	58	51	54	0.15	
2014	11	6	62	51	53	0.57	
2014	11	7	56	46	50	0.00	
2014	11	8	53	39	48	0.00	
2014	11	9	57	46	49	0.90	
2014	11	10	57	44	45	0.06	
2014	11	11	45	36	36	0.00	
2014	11	12	45	33	37	0.00	
2014	11	13	44	29	35	0.00	
2014	11	14	43	24	39	0.00	
2014	11	15	46	23	35	0.00	
2014	11	16	46	24	40	0.00	
2014	11	17	47	24	35	0.00	
2014	11	18	44	28	38	0.00	
2014	11	19	48	28	43	0.00	
2014	11	20	51	41	48	0.18	
2014	11	21	53	46	51	0.69	
2014	11	22	51	44	47	0.25	
2014	11	23	54	46	48	0.55	
2014	11	24	54	38	47	0.12	
2014	11	25	57	46	56	1.25	
2014	11	26	60	54	56	0.07	
2014	11	27	61	53	56	0.10	
2014	11	28	57	38	39	0.78	
2014	11	29	41	28	28	0.05	
2014	11	30	37	21	33	0.00	
	Summary	52	39		6.53	0	

The “” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation  
 Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Bronze Grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 9=Unknown

\*“” This data value failed one of NCDC's quality control tests.

“” values in the Precipitation column above indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.  
 Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft Lat: 47°24' N Lon: 122°41' W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

**Record of Climatological Observations**  
 These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p t i o n	M o n t h	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)			
			24 hrs. ending at observation time	At Obs Time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movements (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	
			Max.	Min.	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F	F	Snow, ice pellets, hail, ice on ground (in)	Ground Cover (see *)	Max.	Min.
2014	12	1	37	24	31	0.00						
2014	12	2	41	24	37	0.00						
2014	12	3	44	24	38	0.00						
2014	12	4	44	36	44	0.02						
2014	12	5	49	36	46	0.11						
2014	12	6	55	45	50	0.22						
2014	12	7	51	41	46	0.00						
2014	12	8	54	45	49	0.23						
2014	12	9	62	48	53	0.39						
2014	12	10	66	51	54	0.96						
2014	12	11	60	45	57	0.14						
2014	12	12	57	45	45	0.11						
2014	12	13	47	40	41	0.00						
2014	12	14	47	33	34	0.00						
2014	12	15	53	29	49	T						
2014	12	16	49	42	44	T						
2014	12	17	47	40	45	0.15						
2014	12	18	49	43	49	0.20						
2014	12	19	54	44	47	0.22						
2014	12	20	55	43	55	0.90						
2014	12	21	56	43	51	0.10						
2014	12	22	52	45	46	0.00						
2014	12	23	55	44	44	0.48						
2014	12	24	47	40	44	0.42						
2014	12	25	46	39	41	0.01						
2014	12	26	43	36	41	T						
2014	12	27	49	39	44	0.19						
2014	12	28	45	40	41	0.02						
2014	12	29	42	36	36	0.01						
2014	12	30	42	30	34	0.00						
2014	12	31	40	26	36	0.00						
		Summary	50	39		4.88				0		

The " " flags in Preliminary indicate the data have not completed processing and qualify control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 2=Fallow; 3=Barren Ground; 4=Brrome Grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare much; 0=Unknown

"s" This data value failed one of NODC's quality control tests.

"T" Values in the Precipitation FFlag or the Snow FFlag column indicate a TRACE value was recorded.

"A" Values in the Precipitation FFlag or the Snow FFlag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
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 identical to the original observations.  
 Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h a y  Y e a r s a f y	Temperature (F)	Precipitation				Evaporation				Soil Temperature (F)				
		24 hrs. ending at observation time		at Obs Time		24 in depth		8 in depth		At Obs Time		24 Hour Wind Movmnt (mi)		
D a y	Max.	Min.	Rain, melted snow, etc. (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail, ice on ground (in)	F Snow, ice pellets, hail (in)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.	Min.
2015	1	1	39	25	32	0.00								
2015	1	2	43	25	42	0.02								
2015	1	3	42	37	40	0.03								
2015	1	4	50	39	50	0.63								
2015	1	5	56	49	55	0.74								
2015	1	6	55	44	45	T								
2015	1	7	55	42	45	0.01								
2015	1	8	46	40	41	0.00								
2015	1	9	48	37	43	0.00								
2015	1	10	47	42	46	0.16								
2015	1	11	48	42	46	0.02								
2015	1	12	49	39	45	T								
2015	1	13	46	38	43	T								
2015	1	14	44	33	37	T								
2015	1	15	45	30	45	0.20								
2015	1	16	55	44	45	0.12								
2015	1	17	55	38	45	0.73								
2015	1	18	56	45	49	0.60								
2015	1	19	53	44	44	0.17								
2015	1	20	47	36	44	T								
2015	1	21	44	31	44	T								
2015	1	22	49	42	48	0.05								
2015	1	23	54	43	51	0.33								
2015	1	24	61	51	57	0.17								
2015	1	25	58	49	49	T								
2015	1	26	59	42	52	0.00								
2015	1	27	56	49	52	T								
2015	1	28	52	46	46	0.00								
2015	1	29	51	40	46	0.00								
2015	1	30	52	35	41	0.00								
2015	1	31	44	38	43	0.00								
	Summary	50	40			3.98	0							

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation.

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren Ground; 4=Shrub; 5=Soil; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 0=Unknown

\*S: This data value failed one of NCDC's quality control tests.

\*TR: Values in the Precipitation Flag or the Snow Flag column indicate a TRACE value was recorded.

\*A: Values in the Precipitation Flag above indicate a multiday total accumulated since last measurement, is being used.

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**Record of Climatological Observations**  
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 Generated on 02/08/2017

P r e c i p i t a t i o n  M o n t h y  Y e a r a r y	D a y	Temperature (F)		Precipitation			Evaporation			8 in depth			
		24 hrs. ending at observation time	at O b s	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move- nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2015	2	1	50	41	46	0.07							
2015	2	2	53	40	49	0.25							
2015	2	3	53	43	46	0.02							
2015	2	4	48	39	47	0.24							
2015	2	5	56	46	54	0.79							
2015	2	6	59	46	53	0.63							
2015	2	7	55	48	51	0.85							
2015	2	8	54	44	52	0.16							
2015	2	9	57	48	51	0.18							
2015	2	10	57	50	50	0.21							
2015	2	11	55	43	51	T							
2015	2	12	59	48	54	0.05							
2015	2	13	61	45	56	T							
2015	2	14	57	50	50	0.00							
2015	2	15	51	38	47	0.00							
2015	2	16	56	42	50	0.00							
2015	2	17	58	36	46	0.00							
2015	2	18	57	38	53	0.00							
2015	2	19	54	49	51	0.05							
2015	2	20	54	49	50	T							
2015	2	21	51	43	49	T							
2015	2	22	52	37	46	0.00							
2015	2	23	54	31	44	0.00							
2015	2	24	55	34	49	0.00							
2015	2	25	52	42	49	0.00							
2015	2	26	52	46	49	0.10							
2015	2	27	53	47	48	1.01							
2015	2	28	52	44	47	0.00							
Summary		54	43			4.61							

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\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brrome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mulch; 0=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRAC-E value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a monthly total, accumulated since last measurement, is being used.

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**Record of Climatological Observations**  
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 Generated on 02/08/2017

Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

P r e i c i p a t i o n  M o n t h y  Y e a r  P r e i c i p a t i o n  M o n t h y  Y e a r 	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
	24 hrs. ending at observation time		24 Hour Amounts ending at observation time		At Obs Time		8 in depth	
	D a y	Max.	Min.	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	24 Hour Wind Movement (mi)	Ground Cover (see *)	
s e s t e m i n a r y				n	o			
2015	3	1	55	34	49	0.00		
2015	3	2	51	43	47	0.00		
2015	3	3	50	32	45	0.00		
2015	3	4	53	30	45	0.00		
2015	3	5	55	35	48	0.00		
2015	3	6	56	36	49	0.00		
2015	3	7	58	35	52	0.00		
2015	3	8	60	38	54	0.00		
2015	3	9	57	39	51	0.00		
2015	3	10	56	43	55	0.00		
2015	3	11	59	42	54	0.12		
2015	3	12	65	52	58	0.06		
2015	3	13	63	46	59	0.00		
2015	3	14	60	52	55	0.67		
2015	3	15	60	45	51	1.67		
2015	3	16	55	46	51	0.04		
2015	3	17	57	41	52	0.01		
2015	3	18	60	48	55	0.00		
2015	3	19	64	46	55	0.00		
2015	3	20	55	48	52	0.09		
2015	3	21	57	48	54	0.30		
2015	3	22	54	42	48	0.20		
2015	3	23	54	40	50	0.08		
2015	3	24	57	43	53	0.43		
2015	3	25	59	44	57	0.18		
2015	3	26	69	49	61	0.00		
2015	3	27	69	48	58	0.00		
2015	3	28	59	50	55	0.13		
2015	3	29	63	49	60	0.00		
2015	3	30	65	52	60	0.00		
2015	3	31	60	46	48	0.10		
	Summary	59	43		4.08	0		

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\*Ground Cover: 2=Fallow; 3=Bare ground; 4=Grass; 5=Soil; 6=Straw mulch; 7=Grass mulch; 8=Unknown

\*A: This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation column above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.  
 Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47°24' N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00459278

### Record of Climatological Observations

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 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e - - m - n a r y	M o n t h	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
			24 hrs. ending at observation time	At Obs Time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2015	4	1	56	42	48	0.09				
2015	4	2	58	42	52	0.00				
2015	4	3	58	39	53	0.05				
2015	4	4	58	39	52	0.00				
2015	4	5	59	38	54	0.00				
2015	4	6	57	45	54	0.02				
2015	4	7	56	47	54	0.02				
2015	4	8	62	45	56	0.00				
2015	4	9	63	44	58	0.00				
2015	4	10	60	45	51	0.05				
2015	4	11	53	43	48	0.35				
2015	4	12	55	43	51	0.00				
2015	4	13	54	43	44	0.13				
2015	4	14	54	40	50	0.24				
2015	4	15	57	39	53	0.08				
2015	4	16	63	40	56	0.00				
2015	4	17	66	44	58	0.00				
2015	4	18	65	49	58	0.00				
2015	4	19	67	44	60	0.00				
2015	4	20	72	45	67	0.00				
2015	4	21	67	50	53	0.00				
2015	4	22	61	42	54	0.00				
2015	4	23	55	46	49	0.11				
2015	4	24	54	44	51	0.40				
2015	4	25	58	44	51	0.00				
2015	4	26	62	39	56	0.00				
2015	4	27	74	52	69	T				
2015	4	28	69	50	51	0.02				
2015	4	29	59	45	53	0.00				
2015	4	30	62	46	59	0.00				
	Summary	60	44			1.56				0

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 Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren Ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 0=Unknown

"S" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.  
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Station: TACOMA NUMBER 1, WA US GHND:USC00458278

P r e s u r e y	M o n t h y	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
			24 hrs. ending at observation time	at O b s e	24 Hour Amounts ending at observation time	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i a g	24 Hour Wind Move mt (mi)	Amount of Evap. (in)
2015	5	1	65	50	58	0.00				
2015	5	2	65	49	58	0.00				
2015	5	3	68	44	62	0.00				
2015	5	4	64	46	55	0.00				
2015	5	5	59	47	50	0.19				
2015	5	6	62	46	57	0.11				
2015	5	7	67	44	64	0.00				
2015	5	8	72	46	67	0.00				
2015	5	9	77	47	69	0.00				
2015	5	10	69	54	60	0.00				
2015	5	11	60	53	56	0.00				
2015	5	12	59	51	55	0.14				
2015	5	13	57	52	52	0.27				
2015	5	14	64	50	59	0.01				
2015	5	15	59	49	57	0.00				
2015	5	16	61	52	59	0.00				
2015	5	17	66	52	62	0.00				
2015	5	18	75	54	70	0.00				
2015	5	19	75	54	66	0.00				
2015	5	20	71	52	68	0.00				
2015	5	21	78	55	74	0.00				
2015	5	22	74	52	57	0.00				
2015	5	23	62	54	60	0.02				
2015	5	24	64	54	60	0.00				
2015	5	25	61	53	59	0.00				
2015	5	26	70	54	67	0.00				
2015	5	27	75	55	73	0.00				
2015	5	28	80	55	74	0.00				
2015	5	29	80	57	70	0.00				
2015	5	30	73	52	70	0.00				
2015	5	31	72	55	68	0.00				
		Summary	68	51		0.74		0		

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Empty, or blank, cells indicate that data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 9=Unknown

\*'S' This data value failed one of NCDC's quality control tests.

\*\*"T" values in the Precipitation Category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

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**Record of Climatological Observations**  
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P r e - i m i n a r y	M o n t h	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)				
			24 hrs. ending at observation time			24 Hour Amount's ending at observation time			At Obs Time			24 in depth				
			Max.	Min.		Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i g	Snow, ice pellets, hail, ice on ground (in)	F i g	Amount of Evap. (in)	Wind Movement (mi)	Ground Cover (see *)	Max.	Min.	Min.
2015	6	1	68	55		58	0.12									
2015	6	2	68	54		59	0.10									
2015	6	3	67	55		60	0.00									
2015	6	4	71	54		68	0.00									
2015	6	5	76	55		73	0.00									
2015	6	6	82	55		78	0.00									
2015	6	7	85	59		79	0.00									
2015	6	8	85	59		78	0.00									
2015	6	9	83	59		74	0.00									
2015	6	10	79	53		73	0.00									
2015	6	11	75	54		73	0.00									
2015	6	12	73	53		64	0.00									
2015	6	13	73	51		71	0.00									
2015	6	14	79	53		74	0.00									
2015	6	15	81	58		74	0.00									
2015	6	16	75	53		67	0.00									
2015	6	17	76	58		67	0.00									
2015	6	18	75	57		66	0.00									
2015	6	19	75	59		66	0.00									
2015	6	20	75	53		70	0.00									
2015	6	21	80	58		79	0.00									
2015	6	22	80	56		74	0.00									
2015	6	23	77	54		73	0.00									
2015	6	24	76	62		74	0.00									
2015	6	25	85	59		76	0.00									
2015	6	26	83	63		80	0.00									
2015	6	27	86	62		83	0.00									
2015	6	28	86	62		73	0.00									
2015	6	29	82	65		77	0.00									
2015	6	30	85	61		79	0.00									
		Summary	78	57		0	0.22									

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\* Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

\* This data value failed one of NCDC's quality control tests.

\* “T” values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

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**Record of Climatological Observations**

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Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n  M o n t h y  Y e a r	D a y	Temperature (F)		Precipitation			Evaporation			Soil Temperature (F)							
		24 hrs. ending at observation time	At Obs Time	24 Hour Amounts ending at observation time	F e v e r y	F e v e r y	Rain, melted snow, etc. (in)	F e v e r y	Snow, ice pellets, hail, ice on ground (in)	F e v e r y	24 Hour Wind Moveme nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.	Min.
2015	7	1	83	62	80	0.00											
2015	7	2	89	63	86	0.00											
2015	7	3	89	64	82	0.00											
2015	7	4	89	61	83	0.00											
2015	7	5	88	62	82	0.00											
2015	7	6	86	61	79	0.00											
2015	7	7	80	60	73	0.00											
2015	7	8	82	60	78	0.00											
2015	7	9	83	60	77	0.00											
2015	7	10	78	62	68	0.00											
2015	7	11	78	62	64	0.00											
2015	7	12	79	62	75	0.00											
2015	7	13	76	63	71	0.00											
2015	7	14	79	60	75	0.00											
2015	7	15	80	60	72	0.00											
2015	7	16	80	60	73	0.00											
2015	7	17	79	58	77	0.00											
2015	7	18	89	59	85	0.00											
2015	7	19	94	63	80	0.00											
2015	7	20	84	63	73	0.00											
2015	7	21	73	57	71	0.00											
2015	7	22	78	59	75	0.00											
2015	7	23	78	59	75	0.00											
2015	7	24	75	58	70	0.00											
2015	7	25	73	62	65	0.00											
2015	7	26	71	59	61	0.47											
2015	7	27	73	56	69	0.00											
2015	7	28	78	56	75	0.00											
2015	7	29	84	59	80	0.00											
2015	7	30	89	59	81	0.00											
2015	7	31	90	60	81	0.00											
		Summary	82	60		0.47											0

The " " flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 2=Grass; 3=Barren ground; 4=Gravel; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 9=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

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U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft Lat: 47.247° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

**Record of Climatological Observations**  
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National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e i m i n a r y	M o n t h	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)		
			24 hrs. ending at observation time		at O	24 Hour Amounts ending at observation time		At Obs Time	24 Hour Wind Movement (mi)		Amount of Evap. (in)	Ground Cover (see *)		Max.
			Max.	Min.		Rain, melted snow, etc. (in)	F Snow, ice pellets, hail (in)	F Snow, ice pellets, hail, ice on ground (in)	Snow, ice pellets, hail, ice on ground (in)	Ground Cover (see *)	Max.	Min.	Min.	
2015	8	1	90	59	82	0.00								
2015	8	2	84	62	77	0.00								
2015	8	3	84	64	76	0.00								
2015	8	4	79	59	71	0.00								
2015	8	5	77	57	65	0.00								
2015	8	6	75	60	72	0.00								
2015	8	7	80	58	77	0.00								
2015	8	8	79	62	68	0.00								
2015	8	9	81	58	74	0.00								
2015	8	10	82	62	74	0.00								
2015	8	11	81	62	78	0.00								
2015	8	12	82	62	77	0.00								
2015	8	13	84	63	78	0.00								
2015	8	14	78	60	61	0.41								
2015	8	15	71	58	69	0.00								
2015	8	16	74	53	69	0.00								
2015	8	17	79	54	73	0.00								
2015	8	18	80	58	73	0.00								
2015	8	19	87	53	78	0.00								
2015	8	20	78	60	66	0.00								
2015	8	21	73	58	68	0.00								
2015	8	22	74	52	70	0.00								
2015	8	23	77	52	70	0.00								
2015	8	24	77	56	67	0.00								
2015	8	25	75	53	69	0.00								
2015	8	26	78	53	72	0.00								
2015	8	27	82	59	74	0.00								
2015	8	28	76	61	67	0.08								
2015	8	29	76	61	63	0.40								
2015	8	30	70	55	64	1.29								
2015	8	31	68	61	66	0.03								
		Summary	78	58	58	2.21								0

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" " This data value failed one of NCDC's quality control tests.

" " values in the Precipitation category above indicate a TRACIE value was recorded.

" " values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47.24° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

**Record of Climatological Observations**  
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National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e i c i p a t i o n  M o n t h y  Y e a r y	Temperature (F)	Precipitation				Evaporation				Soil Temperature (F)			
		24 hrs. ending at observation time		24 Hour Amounts ending at observation time		At Obs Time		24 in depth		8 in depth		Ground Cover (see *)	
		D a y	Max.	Min.	Rain, melted snow, etc. (in)	F i a g	Snow, ice pellets, hail (in)	F i a g	Wind Movement (mi)	Amount of Evap. (in)	Min.	Max.	Min.
2015	9	1	67	58	59	0.30							
2015	9	2	68	55	63	0.03							
2015	9	3	66	51	61	0.00							
2015	9	4	64	53	59	0.00							
2015	9	5	71	48	63	0.00							
2015	9	6	63	53	58	0.05							
2015	9	7	70	53	65	0.00							
2015	9	8	72	55	65	0.00							
2015	9	9	74	57	69	0.00							
2015	9	10	73	54	69	0.00							
2015	9	11	78	56	70	0.00							
2015	9	12	78	57	70	0.00							
2015	9	13	71	59	60	0.00							
2015	9	14	63	52	58	0.01							
2015	9	15	64	47	57	0.00							
2015	9	16	67	49	63	0.00							
2015	9	17	67	55	62	0.23							
2015	9	18	69	53	64	0.00							
2015	9	19	72	58	67	0.00							
2015	9	20	74	64	66	0.01							
2015	9	21	66	54	60	0.18							
2015	9	22	65	45	58	0.00							
2015	9	23	69	44	64	0.00							
2015	9	24	72	51	66	0.00							
2015	9	25	66	55	57	0.31							
2015	9	26	63	52	57	0.00							
2015	9	27	61	43	55	0.00							
2015	9	28	66	43	59	0.00							
2015	9	29	70	46	62	0.00							
2015	9	30	64	50	59	0.00							
		Summary	68	52	1.12	0							

The “\*” flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation  
 Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Bronze grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mud; 0=Unknown

\*“\*” This data value failed one of NCDC’s quality control tests.

\*T values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n  M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			8 in depth			
		24 hrs. ending at observation time	at observation time	24 Hour Amounts ending at observation time	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i a g	Snow, ice pellets, hail (in)	F i a g	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2015	10	1	67	50	61	0.00								
2015	10	2	62	53	57	0.03								
2015	10	3	64	52	59	0.11								
2015	10	4	68	46	61	0.00								
2015	10	5	69	46	62	0.00								
2015	10	6	62	56	59	0.25								
2015	10	7	66	55	60	0.00								
2015	10	8	66	55	60	0.00								
2015	10	9	65	53	60	0.03								
2015	10	10	72	56	57	1.30								
2015	10	11	72	52	59	0.00								
2015	10	12	68	49	63	0.00								
2015	10	13	63	54	56	0.16								
2015	10	14	57	49	53	0.00								
2015	10	15	65	45	57	0.00								
2015	10	16	66	45	59	0.00								
2015	10	17	65	54	59	0.05								
2015	10	18	60	55	59	0.05								
2015	10	19	65	57	61	0.05								
2015	10	20	64	47	55	0.01								
2015	10	21	60	50	54	0.00								
2015	10	22	59	50	54	0.00								
2015	10	23	54	44	52	0.00								
2015	10	24	55	43	51	0.00								
2015	10	25	59	48	53	0.25								
2015	10	26	59	48	54	0.40								
2015	10	27	59	44	53	T								
2015	10	28	58	51	56	0.25								
2015	10	29	62	54	58	0.13								
2015	10	30	65	54	58	0.35								
2015	10	31	60	54	55	2.70								
Summary		63	51		6.12	0								

The \*\*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brack grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

\*A "T" value failed one of NCDC's quality control tests.

\*\*"T" values in the Precipitation category above indicate a TRACE value was recorded.

\*\*"A" values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard Imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be

identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n	M o n t h y	D a y	Temperature (F)		Precipitation			Evaporation			Soil Temperature (F)		
			24 hrs. ending at observation time	At Obs Time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.
2015	11	1	57	50	52	0.58							
2015	11	2	54	48	50	0.13							
2015	11	3	52	44	44	T							
2015	11	4	53	36	48	T							
2015	11	5	58	46	48	0.03							
2015	11	6	62	47	56	0.00							
2015	11	7	56	50	52	0.20							
2015	11	8	53	42	45	0.31							
2015	11	9	50	45	47	0.02							
2015	11	10	54	39	50	0.01							
2015	11	11	53	45	46	0.02							
2015	11	12	52	40	51	0.12							
2015	11	13	58	51	55	0.97							
2015	11	14	55	44	44	2.42							
2015	11	15	49	36	41	1.01							
2015	11	16	48	36	45	0.20							
2015	11	17	56	36	48	1.64							
2015	11	18	49	41	46	T							
2015	11	19	47	41	41	0.13							
2015	11	20	45	29	41	0.00							
2015	11	21	45	29	42	0.00							
2015	11	22	47	30	36	0.00							
2015	11	23	47	30	42	0.07							
2015	11	24	44	38	42	0.32							
2015	11	25	44	36	40	T							
2015	11	26	46	28	37	T							
2015	11	27	45	27	35	0.00							
2015	11	28	45	27	32	T							
2015	11	29	37	31	31	T							
2015	11	30	39	28	37	0.04							
		Summary	50	38	8.22	0							

The " " flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"a" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

Elev: 25 ft. Lat: 47.24° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

P r e - i - m i n a r y	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Observation Time Temperature: 1600 Observation Time Precipitation: 1600		
			24 hrs. ending at observation time	at observation time	s	24 Hour Amounts ending at observation time	at observation time	s	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Soil Temperature (F)
2015	12	1	48	36	42	0.08								
2015	12	2	48	41	47	0.51								
2015	12	3	61	41	49	0.58								
2015	12	4	52	44	46	0.18								
2015	12	5	47	43	45	0.35								
2015	12	6	56	45	53	0.23								
2015	12	7	53	46	47	0.90								
2015	12	8	59	47	54	1.94								
2015	12	9	55	48	50	1.16								
2015	12	10	51	45	46	0.42								
2015	12	11	48	41	47	0.10								
2015	12	12	49	43	47	0.44								
2015	12	13	48	44	46	0.11								
2015	12	14	46	40	41	0.03								
2015	12	15	44	33	43	0.00								
2015	12	16	44	38	39	0.02								
2015	12	17	42	38	41	0.80								
2015	12	18	48	41	42	0.73								
2015	12	19	49	38	44	0.33								
2015	12	20	47	40	41	0.30								
2015	12	21	47	37	39	1.29								
2015	12	22	48	39	40	0.19								
2015	12	23	43	37	39	0.69								
2015	12	24	43	36	40	0.41								
2015	12	25	42	37	37	0.12								
2015	12	26	40	31	38	0.01								
2015	12	27	40	37	38	0.29								
2015	12	28	43	37	41	0.02								
2015	12	29	43	38	39	0.00								
2015	12	30	43	27	35	0.01								
2015	12	31	41	24	30	0.00								
Summary			47	39	39	12.24								0

The \*\*\* flag in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

"a" This data value failed one of NCDC's quality control tests.

"r" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard Imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be

Identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n	M o n t h y	D a y	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)				
			24 hrs. ending at observation time	at O b s e s e r	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Moveme nt (mi)	Amount of Evap. (in)	Snow, ice pallets, hail, ice on ground (in)	F i g a t i o n	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2016	1	1	40	23	29	0.00										
2016	1	2	33	25	26	0.00										
2016	1	3	36	22	34	0.01										
2016	1	4	38	32	38	0.40										
2016	1	5	42	37	41	0.20										
2016	1	6	48	32	38	T										
2016	1	7	44	36	41	T										
2016	1	8	43	35	36	T										
2016	1	9	44	30	41	T										
2016	1	10	48	35	38	0.00										
2016	1	11	43	30	42	0.13										
2016	1	12	45	39	45	0.38										
2016	1	13	55	42	42	0.62										
2016	1	14	46	35	40	0.00										
2016	1	15	46	33	44	0.12										
2016	1	16	54	42	50	0.47										
2016	1	17	51	43	48	0.30										
2016	1	18	53	42	47	0.04										
2016	1	19	48	39	42	0.42										
2016	1	20	51	42	46	0.20										
2016	1	21	50	43	49	0.98										
2016	1	22	57	44	47	0.26										
2016	1	23	47	44	46	0.78										
2016	1	24	50	39	46	0.01										
2016	1	25	51	37	47	0.00										
2016	1	26	54	37	53	0.19										
2016	1	27	57	50	53	0.31										
2016	1	28	56	48	48	0.97										
2016	1	29	56	43	43	0.30										
2016	1	30	47	38	41	0.09										
2016	1	31	47	38	42	0.00										
	Summary	48	37			0										

The "T" flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 2=Fallow; 3=Barren ground; 4=Brrome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

"s" This date value failed one of NCDC's quality control tests.

"T" values in the Precipitation column above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47°24' N Lon: 122°41' W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00456278

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e i c i p a t i o n  M o n t h a y  Y e m i n a r a r y	D a t h	Temperature (F)		Precipitation			Evaporation			Soil Temperature (F)		
		24 hrs. ending at observation time	at 0	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Max.	Min.
2016	2	1	49	39	44	0.01						
2016	2	2	47	34	43	T						
2016	2	3	46	41	45	0.33						
2016	2	4	49	43	48	0.33						
2016	2	5	56	39	49	0.23						
2016	2	6	50	42	44	0.15						
2016	2	7	50	34	45	T						
2016	2	8	56	36	49	0.00						
2016	2	9	58	38	53	0.00						
2016	2	10	55	43	51	T						
2016	2	11	57	42	51	0.15						
2016	2	12	58	49	50	1.05						
2016	2	13	51	44	45	0.56						
2016	2	14	54	44	52	0.17						
2016	2	15	57	51	54	0.13						
2016	2	16	57	50	51	0.16						
2016	2	17	55	46	50	0.15						
2016	2	18	53	44	46	0.25						
2016	2	19	54	43	43	0.39						
2016	2	20	52	38	46	0.23						
2016	2	21	53	34	47	0.08						
2016	2	22	50	41	45	0.14						
2016	2	23	56	32	49	0.00						
2016	2	24	57	32	52	0.00						
2016	2	25	59	38	50	0.00						
2016	2	26	58	41	49	0.12						
2016	2	27	56	47	47	0.20						
2016	2	28	52	41	43	0.65						
2016	2	29	52	42	47	0.07						
		Summary	54	41		5.55						

The \*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brone grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

" " This data value failed one of NCDC's quality control tests.

" " values in the Precipitation category above indicate a TRACE value was recorded.

" A " values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47.24° N Long: 122.412° W

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

P r e i c i p i t a t i o n  M o n t h y  Y e a r a r y	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
		24 hrs. ending at observation time	at observation time	24 Hour Amounts ending at observation time	Al Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2016	3	1	60	44	44	0.79			
2016	3	2	52	43	48	0.32			
2016	3	3	61	47	51	0.17			
2016	3	4	56	40	47	0.17			
2016	3	5	60	47	54	0.21			
2016	3	6	61	44	45	0.13			
2016	3	7	51	42	46	0.43			
2016	3	8	53	39	47	0.00			
2016	3	9	48	43	47	0.88			
2016	3	10	55	44	46	0.33			
2016	3	11	51	36	47	0.17			
2016	3	12	50	42	45	0.27			
2016	3	13	55	41	45	0.27			
2016	3	14	55	40	41	0.47			
2016	3	15	52	40	46	T			
2016	3	16	51	39	46	0.00			
2016	3	17	54	34	50	0.00			
2016	3	18	64	37	56	0.00			
2016	3	19	60	46	54	T			
2016	3	20	55	49	53	0.09			
2016	3	21	57	47	48	0.43			
2016	3	22	57	44	51	T			
2016	3	23	57	44	50	0.13			
2016	3	24	53	42	48	0.35			
2016	3	25	54	43	51	0.00			
2016	3	26	56	40	52	0.00			
2016	3	27	56	40	48	0.19			
2016	3	28	53	40	50	T			
2016	3	29	60	38	57	0.00			
2016	3	30	66	40	59	0.00			
2016	3	31	70	44	63	0.00			
	Summary	56	42		5.80	0			

The " " flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 0=Unknown

"S" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev. 25 ft. Lat: 47.24° N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e - - - - - -	M o n t h y	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
			24 hrs. ending at observation time	At Obs Time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
P	r	e	Min.	Max.	Rain, melted snow, etc. (in)	F Snow, ice pellets, hail, ice on ground (in)	F Snow, ice pellets, hail, ice on ground (in)	Ground Cover (see *)	Max.	Min.
Y	m	a	s	t	v	f	i	see *	Max.	Min.
m	n	h	a	y	w	g	g		Max.	Min.
a	a	r			x				Max.	Min.
r	r	y			o				Max.	Min.
2016	4	1	71	44	59	0.00				
2016	4	2	64	48	57	0.00				
2016	4	3	69	46	62	0.00				
2016	4	4	62	48	49	0.20				
2016	4	5	57	45	55	0.00				
2016	4	6	66	42	58	0.00				
2016	4	7	74	42	64	0.00				
2016	4	8	72	49	62	0.00				
2016	4	9	66	48	59	0.00				
2016	4	10	59	48	53	0.00				
2016	4	11	59	49	55	0.00				
2016	4	12	60	47	48	0.44				
2016	4	13	57	42	55	0.02				
2016	4	14	58	42	51	0.21				
2016	4	15	61	47	56	0.03				
2016	4	16	66	42	58	0.00				
2016	4	17	75	47	67	0.00				
2016	4	18	83	50	73	0.00				
2016	4	19	79	52	73	0.00				
2016	4	20	80	53	71	0.00				
2016	4	21	73	54	68	0.00				
2016	4	22	68	54	56	0.05				
2016	4	23	63	50	53	0.05				
2016	4	24	56	46	47	0.37				
2016	4	25	59	44	53	T				
2016	4	26	60	43	55	0.00				
2016	4	27	62	43	57	0.00				
2016	4	28	65	50	60	0.00				
2016	4	29	61	48	58	0.00				
2016	4	30	66	47	62	0.00				
		Summary	66	47		1.37				0

The -- flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brown Grass; 5=Soil; 6=Straw mulch; 7=Grass mulch; 8=Bare mud; 9=Unknown

"a" This data value failed one of NCDC's quality control tests.

"r" Values in the Precipitation Flag or the Snow Flag column indicate a TRAC-E value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

The “**flags** in Preliminary” indicate the data have not completed processing and quality control and may not be identical in the original observation.

mentary, or blank cells indicate that a data observation was not recorded.

**Ground Cover:** 1=grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw

" This data value failed one of NCDC's quality control tests.

<sup>a</sup> values in the Precipitation category above indicate A TRACE value was recorded.

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

P r e - i - m - n a r y	M o n t h a t h	D a t y	Temperature (F)			Precipitation			Evaporation			8 in depth			
			24 hrs. ending at observation time	at O b	s	24 Hour Amounts ending 9 at observation time	f	v	Rain, melted snow, etc. (in)	F i a g	Snow, ice pellets, hail (in)	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2016	6	1	77	57	68	0.00									
2016	6	2	77	57	66	0.10									
2016	6	3	78	55	70	0.00									
2016	6	4	78	63	75	0.00									
2016	6	5	88	62	83	0.00									
2016	6	6	83	63	75	0.00									
2016	6	7	82	57	69	T									
2016	6	8	69	57	64	T									
2016	6	9	65	53	57	0.04									
2016	6	10	65	51	57	0.13									
2016	6	11	68	51	62	0.28									
2016	6	12	69	52	66	0.09									
2016	6	13	67	53	58	0.04									
2016	6	14	65	47	59	0.01									
2016	6	15	65	47	59	0.01									
2016	6	16	69	50	61	T									
2016	6	17	69	49	57	0.11									
2016	6	18	63	52	60	0.21									
2016	6	19	68	46	62	0.00									
2016	6	20	76	57	64	0.00									
2016	6	21	71	55	70	0.15									
2016	6	22	75	55	69	0.00									
2016	6	23	69	56	62	0.17									
2016	6	24	70	54	63	0.01									
2016	6	25	72	57	69	0.00									
2016	6	26	76	57	75	0.00									
2016	6	27	85	60	75	0.00									
2016	6	28	78	56	78	0.00									
2016	6	29	78	57	73	0.00									
2016	6	30	78	57	70	0.00									
		Summary	73	55		1.26									

The " " flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Bronze grass; 5=Soil; 6=Straw mulch; 7=Bare mud; 0=Unknown

\*A " " data value failed one of NCDC's quality control tests.

"T" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

**Record of Climatological Observations**  
 These data are quality controlled and may not be  
 identical to the original observations.  
 Generated on 02/08/2017

Station: TACOMA NUMBER 1, WA US GHCND:USC00458278

P r e c i p i t a t i o n	M o n t h y	D a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)	
			24 hrs. ending at observation time	Max.	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move- nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2016	7	1	74	56	71	0.00				
2016	7	2	76	60	70	0.00				
2016	7	3	72	57	71	0.00				
2016	7	4	72	56	66	0.00				
2016	7	5	69	56	65	0.00				
2016	7	6	75	57	75	0.00				
2016	7	7	75	60	62	0.10				
2016	7	8	72	59	67	0.11				
2016	7	9	71	58	64	0.13				
2016	7	10	72	57	66	0.02				
2016	7	11	72	57	69	7				
2016	7	12	76	58	69	0.00				
2016	7	13	73	59	66	0.00				
2016	7	14	76	56	68	0.00				
2016	7	15	75	58	71	0.00				
2016	7	16	74	57	72	0.00				
2016	7	17	78	58	75	0.00				
2016	7	18	75	61	69	0.03				
2016	7	19	76	62	72	0.00				
2016	7	20	79	61	73	0.00				
2016	7	21	81	60	75	0.00				
2016	7	22	75	60	68	0.31				
2016	7	23	73	60	68	0.00				
2016	7	24	79	58	75	0.00				
2016	7	25	84	60	77	0.00				
2016	7	26	78	60	76	0.00				
2016	7	27	82	58	80	0.00				
2016	7	28	84	62	82	0.00				
2016	7	29	87	63	83	0.00				
2016	7	30	87	58	69	0.00				
2016	7	31	74	58	72	0.00				
Summary			76	59		0.70		0		

The \*\* flags in Preliminary indicate the data have not completed processing and quality-control and may not be identical to the original observation

\*Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brine grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bara muck; 9=Unknown

\*S: This data value failed one of NCDC's quality control tests.

\*\*T values in the Precipitation category above indicate a TRACE value was recorded.

\*A values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47°24' N Lon: 122.412° W  
 Station: TACOMA NUMBER 1, WA US GHCND:USC00450276

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

Generated on 02/08/2017

P r e i m i n a r y	M o n t h	D a y	Temperature (F)			Precipitation			Evaporation			Observation Time Temperature: 1600 Observation Time Precipitation: 1600			Soil Temperature (F)		
			24 hrs. ending at observation time		At Obs Time	24 Hour Amounts ending at observation time		At Obs Time	24 Hour Wind Movement (mi)		Amount of Evap. (in)	Ground Cover (see *)		Max.	Min.	Max.	Min.
2016	8	1	78	55	74	0.00											
2016	8	2	74	57	66	T											
2016	8	3	74	59	69	0.00											
2016	8	4	78	57	71	0.00											
2016	8	5	79	59	71	0.00											
2016	8	6	71	57	67	0.00											
2016	8	7	67	58	62	0.09											
2016	8	8	71	57	68	T											
2016	8	9	72	60	66	0.00											
2016	8	10	75	59	72	0.00											
2016	8	11	78	58	75	0.00											
2016	8	12	85	60	80	0.00											
2016	8	13	86	62	80	0.00											
2016	8	14	82	58	77	0.00											
2016	8	15	82	60	74	0.00											
2016	8	16	81	57	76	0.00											
2016	8	17	78	58	75	0.00											
2016	8	18	84	60	81	0.00											
2016	8	19	89	64	82	0.00											
2016	8	20	86	60	77	0.00											
2016	8	21	77	58	67	0.00											
2016	8	22	71	57	65	0.00											
2016	8	23	76	53	72	0.00											
2016	8	24	81	60	76	0.00											
2016	8	25	87	58	78	0.00											
2016	8	26	90	60	78	0.00											
2016	8	27	78	62	65	0.00											
2016	8	28	69	56	64	0.00											
2016	8	29	80	54	73	0.00											
2016	8	30	73	59	68	0.00											
2016	8	31	69	57	64	0.01											
		Summary	78	58		0.10										0	0

The "T" flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare mud; 9=Unknown

"\* This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation column above indicate a TRACIE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multi-day total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be

identical to the original observations.

Generated on 02/08/2017

### Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n  M o n d a y  Y e a r y	Temperature (F)	Precipitation		Evaporation		8 in depth		Soil Temperature (F)	
		24 hrs. ending at observation time	at observation time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.
2016	9	1	66	58	60	0.05			
2016	9	2	70	57	63	0.09			
2016	9	3	68	56	62	0.00			
2016	9	4	69	51	65	0.00			
2016	9	5	66	56	63	0.00			
2016	9	6	64	56	63	0.41			
2016	9	7	68	58	64	0.05			
2016	9	8	70	59	63	T			
2016	9	9	71	51	65	0.00			
2016	9	10	77	52	69	0.00			
2016	9	11	77	52	62	T			
2016	9	12	72	50	66	0.00			
2016	9	13	74	47	66	0.00			
2016	9	14	78	51	67	0.00			
2016	9	15	70	52	63	0.00			
2016	9	16	74	51	68	0.00			
2016	9	17	68	57	59	0.40			
2016	9	18	70	57	63	0.04			
2016	9	19	69	56	62	0.02			
2016	9	20	65	48	60	T			
2016	9	21	65	48	61	0.00			
2016	9	22	67	46	60	0.00			
2016	9	23	64	52	59	T			
2016	9	24	65	54	62	T			
2016	9	25	73	58	65	0.00			
2016	9	26	74	55	66	0.00			
2016	9	27	67	59	60	0.07			
2016	9	28	66	52	59	0.00			
2016	9	29	64	46	58	0.00			
2016	9	30	64	47	61	0.00			
	Summary	69	53		1.13	0			

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Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

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Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e i m i n a r y	M o n t h a t h	D a y	Temperature (F)		Precipitation			Evaporation			8 in depth					
			24 hrs. ending at observation time	at O b s e r v a i c n o t h	24 Hour Amounts ending 9 at observation time	F i v a i c n o t h	F i v a i c n o t h	Rain, melted snow, etc. (in)	F i v a i c n o t h	Snow, ice pellets, hail (in)	F i v a i c n o t h	24 Hour Wind Move- nt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2016	10	1	63	49	56	0.04										
2016	10	2	62	51	58	0.06										
2016	10	3	62	50	58	T										
2016	10	4	62	53	57	0.07										
2016	10	5	63	52	60	0.07										
2016	10	6	63	52	57	0.01										
2016	10	7	64	53	60	0.23										
2016	10	8	67	53	61	0.25										
2016	10	9	67	50	51	0.36										
2016	10	10	58	46	52	0.01										
2016	10	11	60	41	54	0.00										
2016	10	12	60	39	56	0.00										
2016	10	13	57	52	53	1.45										
2016	10	14	59	51	53	1.68										
2016	10	15	62	50	54	1.01										
2016	10	16	60	51	52	0.35										
2016	10	17	60	50	55	0.69										
2016	10	18	60	49	54	0.16										
2016	10	19	54	45	51	0.02										
2016	10	20	62	50	56	1.32										
2016	10	21	60	47	50	0.16										
2016	10	22	58	43	52	T										
2016	10	23	59	49	56	1.28										
2016	10	24	59	51	52	0.28										
2016	10	25	64	49	56	0.08										
2016	10	26	56	51	56	0.11										
2016	10	27	59	52	55	0.28										
2016	10	28	62	50	55	0.01										
2016	10	29	59	49	53	0.13										
2016	10	30	53	41	50	0.17										
2016	10	31	59	48	52	0.57										
Summary			60	49		10.57									0	

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\*Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare ground; 4=Bronte grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

\*T\* This data value failed one of NCDC's quality control tests.

"A" values in the Precipitation category above indicate a TRACE value was recorded.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard Imperial units.

U.S. Department of Commerce  
 National Oceanic & Atmospheric Administration  
 National Environmental Satellite, Data, and Information Service  
 Elev: 25 ft. Lat: 47.247° N Lon: 122.412° W

Station: TACOMA NUMBER 1, WA US GHND:USC00458278

### Record of Climatological Observations

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Generated on 02/08/2017

National Centers for Environmental Information  
 151 Patton Avenue  
 Asheville, North Carolina 28801

P r e c i p i t a t i o n  M o n t h y	D a y	Temperature (F)		Precipitation			Evaporation			Soil Temperature (F)			
		24 hrs. ending at observation time	at observation time	24 Hour Amounts ending at observation time	At Obs Time	24 Hour Wind Move ment (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2016	11	1	59	50	55	0.38							
2016	11	2	55	50	54	0.27							
2016	11	3	61	48	52	0.18							
2016	11	4	59	41	55	T							
2016	11	5	57	53	53	1.56							
2016	11	6	62	49	54	0.09							
2016	11	7	58	50	53	0.06							
2016	11	8	66	48	55	T							
2016	11	9	67	52	54	0.09							
2016	11	10	60	47	54	T							
2016	11	11	60	50	56	0.00							
2016	11	12	60	54	54	0.16							
2016	11	13	54	46	53	0.35							
2016	11	14	59	52	52	0.58							
2016	11	15	55	46	47	1.33							
2016	11	16	53	43	46	0.03							
2016	11	17	51	42	44	T							
2016	11	18	53	35	49	T							
2016	11	19	53	46	49	T							
2016	11	20	59	49	51	T							
2016	11	21	54	45	45	0.10							
2016	11	22	54	42	47	0.19							
2016	11	23	50	42	46	0.39							
2016	11	24	52	46	48	0.63							
2016	11	25	51	42	49	0.22							
2016	11	26	51	44	44	0.27							
2016	11	27	48	43	46	0.51							
2016	11	28	53	38	48	0.10							
2016	11	29	54	42	46	T							
2016	11	30	52	43	45	0.17							
Summary		56	46			7.66	0						

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\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Barren grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 9=Unknown

“\*” This data failed one of NCDC’s quality control tests.

“T” values in the Precipitation column indicate a TRACE value was recorded.

“A” values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.  
 Generated on 02/08/2017

### Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e i m i n a r y	M o n t h y	D a y	24 hrs. ending at observation time	Temperature (F)			Precipitation			Evaporation			Soil Temperature (F)						
				Max.	Min.	at O b	s e v a i n o n	f i a g l a i n g	f i a g l a i n g	Rain, melted snow, etc. (in)	f i a g l a i n g	Snow, ice pellets, hail (in)	f i a g l a i n g	Snow, ice pellets, hail, ice on ground (in)	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2016	12	1	48	41	46	0.04													
2016	12	2	52	44	47	0.10													
2016	12	3	50	45	46	0.08													
2016	12	4	47	39	41	0.32													
2016	12	5	42	36	39	0.15													
2016	12	6	40	34	36	T													
2016	12	7	38	30	32	0.00													
2016	12	8	39	30	32	T													
2016	12	9	39	31	38	0.39													
2016	12	10	46	37	43	0.23													
2016	12	11	44	39	40	0.19													
2016	12	12	47	38	40	0.28													
2016	12	13	41	36	36	0.02													
2016	12	14	40	33	35	T													
2016	12	15	39	32	35	0.00													
2016	12	16	36	30	30	0.00													
2016	12	17	35	22	32	0.00													
2016	12	18	40	22	35	0.00													
2016	12	19	48	34	43	0.38													
2016	12	20	50	42	43	0.29													
2016	12	21	45	33	38	0.01													
2016	12	22	43	33	41	0.07													
2016	12	23	41	37	39	0.66													
2016	12	24	41	37	38	0.10													
2016	12	25	41	34	38	T													
2016	12	26	44	32	43	0.12													
2016	12	27	46	40	40	0.17													
2016	12	28	50	38	43	T													
2016	12	29	50	40	44	0.07													
2016	12	30	45	36	37	0.00													
2016	12	31	40	30	38	0.08													
		Summary	43	35	37.5	0													

The \*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Barren Ground; 4=Brome grass; 5=Soil; 6=Straw mulch; 7=Grass mulch; 8=Bare mud; 9=Unknown

"T" = This data value failed one of NCDC's quality control tests.

"R" = values in the Precipitation category above indicate a TRACE value was recorded.

"A" = values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

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**Record of Climatological Observations**  
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 Generated on 02/08/2017

P r e c i p i t a t i o n  M e m i n a s r y	M o n d a y	Temperature (F)		Precipitation		Evaporation		Soil Temperature (F)				
		24 hrs. ending at observation time	at O b s e	24 Hour Amounts ending at observation time	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F i a g	24 Hour Wind Move- mt (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.
2017	1	1										
2017	1	2										
2017	1	3	34	28	29	0.00						
2017	1	4										
2017	1	5										
2017	1	6	40	21	30	0.00						
2017	1	7	40	22	36	0.00						
2017	1	8	41	35	38	0.42						
2017	1	9	44	36	36	0.07						
2017	1	10	44	34	35	0.10						
2017	1	11	37	32	33	0.01						
2017	1	12	38	26	31	0.00						
2017	1	13										
2017	1	14										
2017	1	15										
2017	1	16										
2017	1	17	44	30	43	1.05						
2017	1	18	57	43	47	1.01						
2017	1	19	51	42	47	0.20						
2017	1	20	49	34	46	0.00						
2017	1	21	50	37	45	0.02						
2017	1	22	47	40	40	0.03						
2017	1	23	46	35	41	0.01						
2017	1	24	42	31	39	0.00						
2017	1	25	45	36	44	0.00						
2017	1	26	47	41	46	0.00						
2017	1	27	50	35	46	0.00						
2017	1	28	50	37	41	0.00						
2017	1	29	51	35	46	0.00						
2017	1	30	46	42	42	0.01						
2017	1	31	42	39	39	0.00						
	Summary	45	34			2.93		0				

The \*\*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation. Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Grass muck; 0=Unknown

\*A value failed one of NCDC's quality control tests.

T values in the Precipitation column above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used. Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

### Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 02/08/2017

Observation Time Temperature: 1600 Observation Time Precipitation: 1600

P r e c i p i t a t i o n	M o n t h y	D a y	Temperature (F)		Precipitation		Evaporation		8 in depth		Soil Temperature (F)	
			24 hrs. ending at observation time		at 0 b		24 Hour Amounts ending at observation time		At Obs Time		24 Hour Wind Movement (mi)	
			Max.	Min.	Rain, melted snow, etc. (in)	Snow, ice pellets, hail (in)	F	F	Snow, ice pellets, hail, ice on ground (in)	Wind (mi)	Amount of Evap. (in)	Ground Cover (see *)
2017	2	1	43	33	37	0.00						
2017	2	2	45	35	39	0.00						
2017	2	3	40	34	38		0.54					
2017	2	4	46	38	44		0.98					
2017	2	5	44	35	35		0.99					
2017	2	6										
2017	2	7										
2017	2	8										
2017	2	9										
2017	2	10										
2017	2	11										
2017	2	12										
2017	2	13										
2017	2	14										
2017	2	15										
2017	2	16										
2017	2	17										
2017	2	18										
2017	2	19										
2017	2	20										
2017	2	21										
2017	2	22										
2017	2	23										
2017	2	24										
2017	2	25										
2017	2	26										
2017	2	27										
2017	2	28										
		Summary	44	35					2.51	0		

The \*\*\* flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation.

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 9=Unknown

"T" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

"X" values in the Precipitation Flag or the Snow Flag column indicate a TRAC-E value was recorded.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.